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DEPARTMENT OF COMMERCE AND LABOR
BUREAU OF MANUFACTURES

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MONTHLY
CONSULAR AND TRADE
REPORTS

SEPTEMBER, 1906

No. 312

WASHINGTON .
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MONTHLY CONSULAR *and* TRADE REPORTS

Washington, D. C.

SEPTEMBER, 1906

No. 312

DENATURED ALCOHOL.

ITS USE IN EUROPE AND CANADA.

INFORMATION FOR BENEFIT OF AMERICAN PEOPLE.

PRODUCTION, MANUFACTURE, DISTRIBUTION, AND CONSUMPTION IN VARIOUS COUNTRIES.

Public interest in denatured alcohol will steadily increase between now and January 1, 1907, when the law permitting free alcohol for industrial purposes goes into effect. Denatured alcohol has been manufactured and used in European and some other countries for a number of years, and inquiry is naturally directed to them for information in regard to the methods of manufacture and the regulations under which the product is distributed. Replying to many inquiries from this country for information relating to the extent to which potatoes are used in the distillation of alcohol in Germany and the use of denatured spirits in the arts and manufactures, Consul-General Alexander M. Thackara, of Berlin, has prepared an interesting and comprehensive report, and Consul-General Frank H. Mason, of Paris, has also prepared a report on the manufacture and consumption of denatured alcohol in France.

GERMANY.

EXTENSIVE USE OF POTATOES—COST OF PRODUCTION.

Under date of August 1 Consul-General Thackara forwards the following report:

In Germany in 1905 there were 3,316,593 hectares (8,195,444 acres) planted in potatoes, from which were produced 48,323,353 metric tons, or 1,775,579,073 bushels of 60 pounds each, which was an average of 217 bushels to the acre. With the exception of the year 1901, which was specially favorable for the cultivation of the potato, this crop

exceeds all previous years. The average price of potatoes during the campaign year 1904-5 was 42.58 marks (\$10.13) per 1,000 kilograms (2,204.6 pounds) or 27.6 cents per bushel, which would make the value of the German potato crop of that year \$490,059,948.

In 1904 the potato crop of the United States was placed at 332,830,300 bushels, of a farm value of \$150,673,392, or 45.2 cents per bushel. According to Dr. W. Behrens, one of Germany's experts, in 1901, out of the 26,250,000 hectares (65,000,000 acres) of arable land 3,300,000 hectares (8,100,000 acres), or 12½ per cent, were planted in potatoes. The doctor claims that Germany plants more potatoes, in proportion to its area and number of inhabitants, than any other civilized country.

WAYS OF UTILIZATION.

The most important ways in which the potato is utilized in Germany are: For human food; for fodder for animals; in the industrial arts for the distillation of alcohol, and for the manufacture of starch, starch products, such as starch sugar, starch sirup, dextrin, etc. The best grades are used for eating, the next best for fodder, and the lowest grades for the distillation of alcohol.

There are no statistics available which would indicate the consumption of the potato for human food purposes, but it may be safely estimated at 50 per cent of the total production. For many years the use of potatoes for technical manufacturing purposes has been a popular means in Germany of disposing of a portion of the crop. The most important ingredient—starch—is used either for manufacturing pure starch and its products or for transformation into alcohol by means of fermentation after previous saccharification, and then by distillation, to separate the alcohol from the other substances.

CONSUMPTION IN ALCOHOL DISTILLERIES.

The by-products of factories working with potatoes furnish large quantities of a nutritious fodder, which is highly appreciated in this country where the prices of animal food are high. In the following table are shown the production of alcohol in Germany for the past five campaign years, and the materials from which the spirit was distilled. From the figures may be clearly seen the great extent to which potatoes are used in the German alcohol distilleries. The figures represent hectoliters (1 hectoliter = 26.417 gallons).

Materials.	1900-1901.	1901-2.	1902-3.	1903-4.	1904-5.
Potatoes	3,302,780	3,519,171	2,649,952	3,045,605	2,877,344
Grain	613,749	594,177	625,786	692,483	765,727
Molasses	83,797	88,728	88,124	92,838	107,950
Others	51,534	36,832	19,073	33,373	36,431
Total	4,051,860	4,238,908	3,382,934	3,854,299	3,787,452
Gallons	107,038,175	111,979,432	89,367,127	101,813,197	100,058,300

In all the statistics in this report the gallon, unless specially mentioned otherwise, refers to the United States gallon, of 231 cubic inches of pure alcohol.

In the campaign year 1904-5 there were 91,148,182 bushels of potatoes consumed in the production of the 2,877,344 hectoliters of alcohol

(76,010,927 gallons), or about 1.26 bushels of potatoes to the gallon of alcohol. In 1904-5 there were 72,172 alcohol distilleries in operation, of which 6,048 farm distilleries and 21 industrial distilleries used potatoes; 7,620 farm distilleries and 780 industrial distilleries used grain, 39 distilleries used other materials; 29 used molasses, and 57,635 small farm distilleries, called "Materialbrennereien," used fruit, wine, etc.

CLASSIFICATION OF DISTILLERIES.

For tax purposes German distilleries are divided into three classes:

1. Industrial distilleries (gewerbliche Brennereien) carried on by individuals or companies solely for manufacturing purposes. These distilleries have to pay per hectoliter of pure alcohol in addition to the consumption tax—first an addition of from 16 to 20 marks (\$3.81 to \$4.76) and a distilling tax of from 2 to 6½ marks (47.6 cents to \$1.55). Distilleries producing not more than 200 hectoliters (5,283 gallons) are exempt from the "distilling tax," and the smaller distilleries pay the lower rates according to fixed scale.

2. Agricultural distilleries (landwirtschaftliche Brennereien) are those using as raw materials, potatoes or grain grown on the owner's farms, or on the farms of one or more of the owners, if the distillery belongs to a cooperative society or company. These pay modified "additions" of from 10 to 20 marks (\$2.38 to \$4.76) per hectoliter of pure alcohol, and are exempt from the distilling tax, or pay only from 1 to 3 marks (23.8 to 71.4 cents) per hectoliter; or, instead of these taxes, they may elect to pay a fermenting vat tax of from 0.786 marks to 1.31 marks (18.7 to 31.1 cents) per hectoliter on the fermenting vat capacity for each fermentation.

3. Material distilleries (Materialbrennereien) are those using berries, fruits, wine lees, grape pressings, etc. In addition to the consumption tax of 50 marks (\$11.90), they pay from 0.10 to 0.85 mark (2.38 to 20.2 cents) per hectoliter of material used.

OUTPUT OF AGRICULTURAL STILLS.

The alcohol production of the agricultural distilleries varies from between 5 and 10 hectoliters (132 to 264 gallons) of pure alcohol to 3,000 and 4,000 hectoliters (79,251 to 105,668 gallons) per year. Last year the smaller plants, the material distilleries, mainly located in the Schwarzwald, in the Grand Duchy of Baden, and in Alsace-Lorraine, 57,635 in number, produced together 36,431 hectoliters of alcohol (962,399 gallons). Among them were seven which produced one-half a hectoliter (13.20 gallons) each. In the same year, on the other hand, as has been mentioned before, the 6,069 potato distilleries produced 76,010,927 gallons. In Germany the distillation of alcohol from potatoes is one of the most important branches of agriculture. It alone, in some cases, renders farming pursuits possible in regions situated at a distance from business centers and possessing light soil, and many farms owe their existence to their distilleries.

COST OF PRODUCTION.

Based on the statistics of the last campaign, it required 1.26 bushels of potatoes to produce 1 gallon of pure alcohol. The approximate

yield from other materials was as follows: Molasses, 26 liters (6.868 gallons) from 100 kilograms; grain, according to the variety, whether wheat, rye, barley, or maize, from 22 to 24 liters (5.811 to 6.34 gallons) from 100 kilograms.

I have been unable to obtain satisfactory data regarding the cost of production of alcohol from the different materials. It depends upon many different conditions, the size of the distillery, the efficiency of the apparatus, and the methods used, upon whether or not the owners of plants have other industries connected with them, upon the disposition which is made of the by-products, etc.

DRINKING AND INDUSTRIAL PURPOSES.

In 1904-5 there were 220,300,000 liters of alcohol (58,000,000 gallons) used for drinking purposes, 139,850,000 of liters (37,000,000 gallons) for consumption in the industries, of which 98,010,000 liters (26,000,000 gallons) were fully denatured and 15,070,000 liters (4,000,000 gallons) for the manufacture of vinegar. The consumption for drinking purposes, with the exception of the year 1894-95, was the lowest since 1891-92, while the quantities used for the industries were the highest ever known, gradually increasing from 38,750,000 liters (10,250,000 gallons) in 1887-88 to 139,850,000 liters (37,000,000 gallons) during the past campaign year.

The fully denatured alcohol, 26,000,000 gallons, used during 1904-5, was almost exclusively employed in producing power, light, and heat. During 1887-88 the amount of denatured alcohol consumed was only 3,600,000 gallons, or, in other words, the consumption of alcohol for light, heat, and power purposes in Germany has increased over seven times in the past seventeen years. The use of spirits for driving motors, lighting rooms and public places, cooking food and producing heat has a great future. In the United States, where alcohol for use in the industries can be produced more cheaply perhaps than in any country in the world, the increased consumption of the spirit which will take place under the provisions of the new law will be of great advantage to our agriculturists.

USE OF INCOMPLETELY DENATURED ALCOHOL.

Manufactures, etc., in which "incompletely denatured" alcohol was used in Germany during 1904-5 consumed 3,700 gallons for brewers' varnish, 8,000 gallons for rubber preparations, 684,000 gallons for the manufacture of celluloid, 2,536 gallons for making synthetic camphor, 2,131,000 gallons for sulphuric ether, 14,160 gallons for the manufacture of emulsions of bromide, chloride and iodide of silver and gelatine, photographic paper, dry plates, etc.; 3,500 gallons for electrodes for electric storage batteries, 27,760 gallons for acetic ether, 4,750 gallons for glucosides, 1,056 gallons for Japan varnish, 11,800 gallons for surgical dressings, 7,053 gallons for chloroform, 10,567 gallons for iodoform, 4,780 gallons for ethyl bromide, 14,660 gallons for stamping colors, 713 gallons for making ink, 8,030 gallons for finishing silk bands, 1,270,000 gallons for varnishes and polishes of different kinds, 5,250 gallons for soap making, 25,780 gallons for the manufacture of lanolin, and 1,520,000 gallons for making chemical preparations not otherwise named, and for other purposes.

CONSUMPTION OF TAX-FREE ALCOHOL.

In the following table is given the amount of tax-free alcohol which was delivered for use in Germany for the past five years ended September 30, 1905:

Year.	Completely denatured.	Incompletely denatured.	Undenatured.	Total.
	<i>Gallons.</i>	<i>Gallons.</i>	<i>Gallons.</i>	<i>Gallons.</i>
1901	17,210,490	7,474,588	744,040	25,429,118
1902	15,504,088	7,609,668	1,307,394	24,421,100
1903	19,804,180	7,986,060	391,424	28,181,664
1904	25,998,865	10,195,558	575,385	36,769,753
1905	25,889,102	10,353,633	701,184	36,943,869

The use of undenatured tax-free spirits in the preparation of medicinal tinctures and prescriptions was formerly allowed in Germany. The privilege was withdrawn after September 30, 1902. The undenatured alcohol is now only allowed to be used tax free in certain hospitals, asylums, and public scientific institutions, and for making smokeless powder, fulminates, etc., mainly in Government factories. The sudden increase from 744,040 gallons in 1901 to 1,307,394 gallons in 1902 was probably connected with the publication of the intention of the Government to disallow the use of pure tax-free spirits for medicinal purposes, this intention being published a year in advance of the time it was to take effect.^a

METHODS FOR DENATURING.

For the methods used in Germany for denaturing alcohol, I would refer to Consul-General Mason's report on "Denatured alcohol and its uses," published in Monthly Consular Reports No. 299, August, 1905, or to my report, published in Monthly Consular and Trade Reports No. 308, May, 1906. [The edition of the former is exhausted, but the French and Italian methods were described in the issue of the Daily of August 6, 1906, copies of which can be had from the Bureau of Manufactures until the supply is exhausted.]

All the special substances sanctioned for denaturing purposes have to pass through elaborate tests prescribed by law. A description of these tests would be too lengthy for a consular report. The provisions relating to the tests and the requirements as to the quality of the pyridin bases, wood alcohol, and the various other substances used for denaturing may be found in a book printed in German entitled "Branntwein Steuer Ausführung Bestimmung 8 Teil betreffend Branntweinsteuer-Befreiungsordnung," which may be obtained from R. von Decker, 56 Jerusalem Strasse, Berlin.

REGULATIONS FOR DISTRIBUTION.

Much, if not the greater portion, of the partially denatured spirit used by German manufacturers is denatured in the works in which it is actually employed, and this is invariably the case when the volume of the spirit handled is large. Owing, however, to the fact that the freight charges on pure alcohol are higher than on the denatured spirit, and to other circumstances, manufacturers requiring only a rel-

atively small quantity of the denatured spirit, either complete or partial, may obtain it from professional methylators working under revenue supervision.^a

When not purchased the users of the denatured spirit have to pay for the analyses as well as to provide the denaturing material and proper stores, vessels, etc., for keeping and mixing the approved reagents with the alcohol. The mixing takes place in the presence of the tax officials, and the quantities of each kind of specially denatured alcohol have to be entered in a separate account in the "control book," kept in separate vessels or compartments at the factory, and used under the conditions prescribed by law.

In distilleries or alcohol storehouses where the tax officials are permanently located no charge is made for these services. In other cases two tax officials are generally present when the denaturing takes place, the fee for their services being 1 mark 60 (38 cents) per hour in all. It may be said that it costs a little over 2 cents a gallon to completely denature the spirit.

INGREDIENTS USED TO DENATURE.

Alcohol of 90 and 95 per cent purity is used in making denatured alcohol. Tax-paid spirit and spirit containing more than 1 weight per cent of fusel oil are not admitted for denaturing. The pyridin bases are used mainly to increase the nauseous character of the wood alcohol used for denaturing. The prices of the pyridin of the quality demanded by the Government have varied considerably. In 1887, when the present law went into effect, pyridin bases cost from 300 to 350 marks (\$71.40 to \$83.30) per 100 kilograms (220.46 pounds), or from 32.4 to 38 cents per pound. The price fell to about 70 marks (\$16.66), or 7.6 cents per pound, and then rose again to 130 marks (\$30.94), or 14 cents per pound, at which level pyridin bases remained for many years. The prices to-day are from 125 to 140 marks, or 13½ to 15 cents per pound.

The pyridin bases are sold in Germany under the designation of "den steueramtlichen Anforderungen entsprechend" (complying with the excise requirements), and the seller must assume the responsibility that the pyridin, when examined by the tax officials, is fully up to the standard required by law. Pyridin is made from coal tar, while bone oil is a product obtained by bone distillation.

PRICES FOR STANDARD MIXTURE.

The present prices per pound in Germany of the various substances used for denaturing alcohol, depending upon the quantity ordered, are as follows:

	Cents.	
4 parts wood alcohol, 1 part pyridin base	9.75 to	11.90
Denatured wood alcohol	8.65 to	10.80
Pyridin bases	13.50 to	15.15
Camphor	55.17 to	57.40
Turpentine oil	17.30 to	24.30
Benzol	8.65 to	10.80
Sulphuric ether	24.30 to	30.30
Animal oil	27.00 to	32.50

^a Report of English Industrial Alcohol Commission, 1905.

	Cents.
Chloroform	16.80 to 19.50
Iodoform	292.00 to 325.00
Ethyl bromide	54.00 to 70.40
Benzine	7.50 to 8.10
Technically pure methyl alcohol	10.80 to 13.00
Castor oil	18.90 to 21.20
Lye	5.00 to 6.40

The present retail selling prices of denatured alcohol are 95 volume per cent, 33 pfennigs per liter, or 29.69 cents per gallon; 90 volume per cent, 30 pfennigs per liter, or 27 cents per gallon. At wholesale the prices range from 28 to 29 pfennigs per liter, or from 25.2 to 26.1 cents per gallon. The wholesale prices of petroleum naphtha, duty paid in Berlin, for automobile use are 33 marks (\$7.85) per 100 kilograms (220.46 pounds), or 20.9 cents per gallon, for the best grade, and for a lower grade 28 marks (\$6.66) per 100 kilograms, or 17.7 cents per gallon. Refined petroleum, "standard white," for use in lamps, 22.25 marks (\$5.29) per 100 kilograms, or 14.1 cents per gallon; and "water white" 24.55 marks (\$5.84) per 100 kilograms, or 15½ cents per gallon. In the small shops refined petroleum, best grade, sells at retail for 21½ cents per gallon and an inferior grade for 18 cents a gallon.

DISTRIBUTION OF SPIRIT CONTROLLED.

The distribution of spirit produced in Germany is practically controlled by a society known as the "Centrale für Spiritus Verwertung," with its principal offices in Berlin. It has written agreements with the principal distillers to take their product at a certain price, determined by the society at the commencement of the campaign, after it has obtained sufficient statistical data concerning the crop. At the end of the campaign the society adjusts with the distillers the losses or profits, based upon the fixed price, resulting from the operations of the society in disposing of the spirit. In 1906 this price is 42 marks (\$10) per hectoliter (23.47 gallons), or 42.6 cents a gallon, as against 56 marks per hectoliter, or 56.8 cents per gallon, last year.

REVENUE DERIVED BY THE GOVERNMENT.

The receipts of the German Government from alcohol for the year 1904-5 were, from all sources: Distillation tax, \$2,380,364; consumption tax, \$35,532,093, and mash-tub tax, \$8,311,681, making a total of \$46,224,138, from which there was rebated mash-tub tax, \$4,004,207; distillation tax, \$1,943,431, and consumption tax, \$3,824,605, a total rebate of \$9,772,243, leaving a net revenue to the Government of \$15,719,881.

As a bonus on the denatured alcohol, on the alcohol exported and the alcohol used in the manufacture of exported goods, a portion of the mash-tub tax and the distillation tax is rebated. This rebate during the last campaign year amounted to \$6,140,657, so that the cost of alcohol for drinking purposes was increased a little over \$6,000,000 for the benefit of the industrial use of the spirit. For those who would study in detail the methods in use in Germany for the distillation of alcohol, I would recommend Maerker's Handbuch der Spiritusfabrikation, published by Paul Parey, Hedemann strasse, Berlin; price, 26 marks (\$6.20), including postage.

POTATO VARIETIES THAT YIELD GREATEST RESULTS.

In reply to inquiries from the United States concerning a certain variety of potato used in Germany for distillation of alcohol, from which it is said twice the quantity of the spirit may be obtained that is secured from any other, Consul-General Thackara writes as follows.

In Germany there are many varieties of potatoes, all meritorious and more or less specially adapted to each peculiar condition of soil, exposure, or purpose for which the potato is to be used.

For the distillation of alcohol, Professor von Eckenbrecker, of the "Deutsche Kartoffel Kultur Station," one of the German experiment stations established by the ministry of agriculture, has recommended the following varieties:

- Professor Wohltman.
Iduna.
Topaz.
Sas.

Leo.
Richter's Emperor.
Silesia.
Professor Marker.

At the Marienfeld experiment farm last year the trials of these potatoes resulted as follows:

Varities.	Bushels per acre.	Per cent of starch.
Professor Wohltman	342	16.3
Iduna	284½	16.4
Topaz	326	17.3
Sas	399	18.3
Leo	412	17
Richter's Emperor	476	15.4
Silesia	367½	16.3
Professor Marker	428	14.5

HOW OBTAINED AND PRICES.

There are so many elements which enter into the successful cultivation of the potato, whether for eating, for the distillation of alcohol, or for the production of starch, that it would be difficult to select a single variety which would thrive under all conditions. Persons who desire any of the foregoing mentioned potatoes for seed purposes can order them direct from the professor, whose address is "Professor von Eckenbrecker, Deutsche Kartoffel Kultur Station, No. 4 See-Strasse, Berlin." As the crop is not yet harvested it is difficult at this time to give an exact price, but it would probably range from 3 marks to 4 marks (71.4 to 95.2 cents) per 50 kilogrammes (110 pounds) or 39 to 50 cents a bushel of 60 pounds. If carefully selected the price would be about 5 marks (\$1.19) per 50 kilos or 65 cents a bushel. If packed in wooden crates of 55 pounds each, 1 mark 50 pfennigs (35.7 cents) per crate, or if packed in bags 45 pfennigs or 10½ cents per 50 kilos extra. The freight to shipping port, Hamburg or Bremen, would be from 0.50 to 1 mark (11.9 to 23.8 cents) per 50 kilos, according to quantity.

Messrs. Metz & Co., of Steglitz bei Berlin, a reputable seed house, inform me that they could furnish the Silesia, Professor Wohltman, Leo and Richters Emperor varieties, which they recommend for dis-

tillation purposes, for about 3 marks (71.4 cents) per 110 pounds, or 39 cents a bushel, delivered at Hamburg, but they could not make a firm offer till October, and, until they know the quantity which would be ordered.

Professor von Eckenbrecker says that the potatoes could be shipped in late October, but he would advise that they should be left here all winter and forwarded in March, as there would be less loss and a much greater chance of the potatoes arriving in the United States in good condition for seed purposes.

FRANCE.

MATERIALS FOR MANUFACTURE—EXTENT OF CONSUMPTION.

Consul-General Frank H. Mason, of Paris, who made a report on this subject in the latter part of 1903, while consul-general at Berlin, furnishes the following report:

The alcohol which is used in France for various industrial purposes is manufactured mainly from beet root, the material being either the refuse molasses from sugar factories or beets which by reason of unfavorable weather, inferior soil, or other cause contain only a small proportion—4 to 6 per cent—of sugar. Potatoes and grain are also used to some extent for distilling purposes, but to a relatively much less extent than in Germany, where the potato is the great dominating source of industrial alcohol.

Unlike the German system, which permits several methods of denaturation, according to the special purpose for which the spirit is to be subsequently employed, the French statute provides but one general process, which is applied indiscriminately to all alcohol to be employed tax free in manufactures and for burning or lighting purposes. The statute provides that all alcohol to be denaturized shall contain not more than 1 per cent of fusel oil and shall be of exactly 90° purity. If of a higher grade the spirit must be reduced; if lower it must be strengthened to 90° before it can be denaturized.

STANDARD MIXTURE.

The process, which must be carried out in presence of a Government official, consists in the addition to each hectoliter (100 liters, equal to 26.42 gallons) of the following standard denaturizing mixture and cost:

	Francs.
15 liters of methylene (wood alcohol).....	19.50
$\frac{1}{2}$ liter heavy benzine.....	30
1 gram Malachite green.....	06
Total cost of denaturants for 26.42 gallons.....	19.86
Equal to.....	\$3.70

The market value of crude alcohol fluctuates slightly in France, as elsewhere, but a fair average price is \$5.21 per hectoliter, or 20 cents per gallon. Add to this the foregoing cost of denaturants and we have a total cost of \$8.91 for 115 $\frac{1}{2}$ liters—or about 30 gallons—of denaturized spirit. This would mean 30 cents per gallon as the net cost in ordinary times of industrial alcohol in France.

The total consumption of denatured alcohol varies from 250,000 to 300,000 hectoliters (6,600,000 to 7,926,000 gallons) and the quantity used does not fluctuate beyond these limits, although the French Government has endeavored in various ways to encourage the manufacture and use of spirits for heating, power, illuminating, and other industrial purposes.

Prior to 1900 there was an internal-revenue tax of 26 cents per gallon, and this, added to the high cost of denaturing materials, raised the price of denatured spirit above the limit of economical consumption for many purposes. To remedy this the tax was reduced to 25 centimes (5 cents) per hectoliter, which with an additional fee of 80 centimes (16 cents) per hectoliter for registration, removal permit, etc., makes a merely nominal charge of 1.05 francs per hectoliter, or less than 1 cent per gallon on raw spirit.

GOVERNMENT BOUNTY ON MANUFACTURE.

As a still further and more important favor, article 59 of the law of February 25, 1901, provides for the payment of a premium or bounty of 9 francs (\$1.74) per hectoliter on all alcohol manufactured in France and submitted to denaturation, so that after deducting from this bounty the nominal tax above described the manufacturer receives a net premium equal to 7.95 francs (\$1.53) per hectoliter. This amounts to a net subsidy of about 6 cents per gallon, and explains why producers of raw alcohol in France are serenely satisfied with the present system.

Meanwhile repeated efforts have been made to provide a cheaper and more effective method of denaturation, for experience soon proved that alcohol denatured by the methylene-benzine-malachite-green process could be restored by purification so as to be available for many purposes not contemplated by the law. Experiments were made with pyridin (a nitrogenous base distilled from bone oil or coal tar) as well as with wool grease and other substances, but none have proven sufficiently superior to supersede wood alcohol, which here (as well as in Great Britain) is considered the essential basic element of a standard denaturant.

GOVERNMENTAL EFFORTS TO EXTEND CONSUMPTION.

The French Government, like that of Germany, was attracted by the idea that if the manufacture and use of denatured alcohol could be sufficiently stimulated and extended there would be not only added an important product to home agriculture, but the country would be provided in case of war with a native-grown fuel for military vehicles and other important purposes which would not be imperiled by the interruption of an imported supply of petroleum products. Accordingly, the ministers of commerce and agriculture organized a special exposition and offered prizes for the most effective types of alcohol motors, both stationary and portable, for motor vehicles and agricultural machinery, as well as alcohol lamps, stoves, and other fixtures for domestic use.

So far as can be ascertained the success of this movement has been, on the whole, disappointing, so that, as already stated, the consump-

tion of denatured spirits for such purposes has not increased to any important degree. The motor-car builders admitted, as a result of their experiments, that alcohol was, chemically considered, a purer and more economical fuel for France than petroleum, but it required for highest efficiency a motor specially constructed for burning alcohol, the vapor of which explodes more suddenly and powerfully than that of petroleum essence. Moreover, the gases generated by the combustion of alcohol vapor attack steel and iron, so that the cylinders and valves proved difficult to keep bright and in order. A mixture of 20 to 30 per cent of benzine with the alcohol was tried and showed some advantage, but according to report the alcohol and benzine volatilize at different temperatures, so that one ingredient would be exhausted more rapidly than the other, and the experiment fell short of the anticipated success.

For the same reason the alcohol denatured with wood alcohol and benzine proved only partially successful in lamps. Such of these as were tested required half a minute or more to light, and unless burned in a cold room the light diminished gradually to about 50 per cent of its original brilliancy until extinguished and refilled, so that after a more or less unsatisfactory trial, most of the users of alcohol lamps returned to the use of petroleum or colza oils. It is not asserted that these unsatisfactory results with denatured spirit were unavoidable or might not have been averted by improved and more scientific apparatus, but this is substantially what has occurred.

PENALTY FOR RECTIFYING DENATURED SPIRIT.

There was of course danger that denatured alcohol might be so far purified by skillful chemical treatment as to be applicable to certain forms of manufacture where pure spirit should be employed. To prevent this the law of August 16, 1900, forbids under penalty of heavy fine and imprisonment from six days to six months any rectification or attempted rectification for any purpose of alcohol which has been denaturized, unless done under the supervision of Government officials and with a special license previously obtained, in which the quantity of spirit to be restored, the degree of such restoration and the purpose for which it is to be finally employed are elaborately prescribed and authorized.

Manufacturers of ethers, chloroform, and certain other chemical products are permitted to purchase pure alcohol free of the tax, but the whole process of such manufacture must be carried out under supervision of revenue officials and guarantees that the spirit so exempted will not be used for any other purpose. Alcohol is largely used in the manufacture of smokeless powder, but as that is a Government monopoly no special license or supervision is required.

IMPORTATIONS OF ALCOHOL.

Amylic alcohol imported into France bears a maximum specific duty of 8 francs per 100 kilograms (\$1.54 per 220 pounds), which is reduced to 6.25 francs (\$1.20) per 100 kilograms on alcohol coming from countries which enjoy by treaty the advantage of the minimum tariff schedule with France.

Methylene, or wood alcohol, pays a maximum of 13 francs (\$2.50) per 100 kilograms, or a minimum rate of 9.25 francs (\$1.78) per 100 kilograms under the same conditions.

The last year for which complete statistics are available, covering the manufacture, denaturation, importation, and various uses of alcohol in France, presents the following interesting record, giving materials from which alcohol was manufactured:

Materials:	Hectoliters.
Grain and potatoes	352, 928
Molasses.....	670, 969
Beets.....	926, 159
Wine.....	26, 810
Apples and pears.....	2, 274
Lees of wine	54, 903
All other material.....	104, 997
Imported, mainly from Germany and Holland	92, 000
Total supply	2, 139, 040
Equal to	gallons.. 56, 513, 436

METHODS OF CONSUMPTION.

The methods of consumption are shown in the following table:

	Hectoliters.
Drinking and other purposes.....	1, 308, 903
Denatured	374 598
Converted to vinegar	87, 285
Consumed free at distilleries	98, 070
Leakage	4, 704
Losses through accident.....	4, 503
Exported	284, 207
Total	2, 162, 270
Equal to	gallons.. 57, 127, 173

Tax was paid on the quantity used for beverages and other purposes. The present wholesale price of grain alcohol ranges from 50 to 55 francs (\$9.65 to \$10.61) per hectoliter of 26.42 gallons, according to quality. This would be equivalent to 36 to 40 cents per gallon. Methyl or wood alcohol is imported into France mainly from Great Britain and Germany. Its present wholesale price in Paris is about 77 francs (\$14.86) per hectoliter, or approximately 56 cents per gallon.

CANADA.

REGULATIONS FOR MANUFACTURE AND SALE.

The question of freer use of denatured alcohol is claiming the attention of persons in this country engaged in scientific and industrial enterprises, as well as the officials of the Government who will be charged with the execution of the act of Congress providing for free alcohol in the arts and sciences, which will go into effect January 1, 1907.

The Dominion of Canada for about fifteen years has granted alcohol free of tax for scientific and industrial purposes, and since 1890 the government has directly controlled the manufacture and sale of methylated spirits. Prior to that time the business was carried on in

licensed establishments under governmental supervision. Methylated spirits, a combination of wood and grain alcohol, is sold by the Canadian government at from \$1.10 to \$1.50 per gallon, according to grade. The former is composed of 25 per cent wood and 75 per cent grain alcohol, and the latter 50 per cent wood and 50 per cent grain. The lower grade is supplied to manufacturers under a bond, and is used in certain lines of manufactures. The higher grade is sold to any person without bond. Hon. William Templeman, minister of inland revenue, in a recent letter to the Canadian Manufacturer, explains that the question for solution in Canada is not legislation for free alcohol, which Canada has had for so many years, but a process of manufacture that will materially reduce the price of both grain and wood alcohol. That question is engaging the attention of the inland-revenue department, and Minister Templeman states that if a safe denaturing agent less expensive than wood alcohol can be procured, the price of alcohol thus treated will be very materially reduced.

ENGLAND.

FLUCTUATING PRICE OF SPIRITS.

Although the use of methylated spirits for industrial purposes in Great Britain has been so retarded by out-of-date regulations, according to a London paper, it appears that in the last few years British distillers have regained the home market, and importations of German plain spirits for methylating has dwindled to the vanishing point. None was imported last year. Four years ago the imports from Germany amounted to over \$1,000,000 per annum. The average values of the imports showed wide variations in the five last years of importing, being rated at 18.6, 13.8, 17.2, 28.5, and 36.83 cents. These variations were mainly governed by the quantity of potatoes available in eastern Europe for conversion into spirits.

ALCOHOL AND GASOLINE PRICES.

As a result of inquiries by Consul John L. Griffiths in Liverpool, he reports that the price in England for wood alcohol from manufacturers to first hands, such as wholesalers, large manufacturers, etc., is from 46 to 48 cents per imperial gallon.

As to the present price in England of grain alcohol to first hands, there is apparently very little grain alcohol used. The price is 24 cents per proof gallon, and 30 cents when it is 25 degrees overproof. This is for the oil itself, as an extra charge is made for the casks; but the oil will be delivered at this time, plus the cost of the casks, at the prices named free on board steamers at Liverpool.

The largest oil importers at Liverpool state that the price of gasoline to first hands is 34 cents per gallon. They also state, however, that gasoline is not used in England as fuel for motor cars or automobiles, but simply for lighting purposes, and that what is used for fuel is known by the name of motor spirit, the price of which, to first hands, they give as 23 cents per gallon. All the answers received indicate that there is practically no demand for alcohol to be used as fuel for engines, automobiles, etc. One of the largest Liverpool chemical companies state that they know of nothing that is used for denaturizing grain alcohol when freed from tax but methyl alcohol.

EUROPE.

GERMAN EMPIRE.

COMMERCE WITH UNITED STATES.

LARGE INCREASE IN VALUE OF EXPORTS FROM NEARLY EVERY CITY.

Consul-General A. M. Thackara, of Berlin, furnishes a report showing the declared values of exports to the United States by consular districts from Germany during the fiscal years ended June 30, 1905 and 1906, respectively, and the general totals since and including the fiscal year 1900.

The value of the declared exports for the past fiscal year has broken all previous records, with a total of \$136,018,634, nearly \$18,000,000 in advance of the previous fiscal year, and \$30,000,000 greater than that of 1904. The aggregate for the fiscal year 1906 would have been still greater had there not been a large shrinkage in the exports of beet sugar to the United States.

The movement, which indicates most clearly the valuable trade which Germany is enjoying with the United States, is still increasing. The value of the declared exports from the Berlin consulate-general for the quarter ended June 30 last, \$3,078,485, was \$707,178 greater than for the quarter of the previous fiscal year, and over a million dollars in advance of the corresponding quarter of the fiscal year of 1904.

The annexed table shows the value of declared exports by consular districts for the two fiscal years named:

District.	1905.	1906.	Gain (+) or loss (-).
Aix la Chapelle	\$1,322,160	\$2,11 42	+ \$791,282
Annaberg	429,898	64 06	+ 138,008
Bamberg	1,221,152	1,41 22	+ 237,070
Barmen	4,224,462	5,07 38	+ 854,271
Berlin	10,182,520	12,77 69	+ 2,592,749
Bremen	1,683,859	2,07 64	+ 394,725
Breslau	1,489,666	1,51 57	+ 56,691
Brunswick	2,699,951	2,38 29	- 209,662
Chemnitz	6,577,385	9,08 88	+ 2,457,208
Coburg	4,029,838	4,76 09	+ 739,371
Cologne	3,348,979	4,57 36	+ 1,209,708
Crefeld	2,421,776	2,76 85	+ 281,909
Dresden	1,713,207	2,91 10	+ 1,193,204
Düsseldorf	1,192,429	3,41 06	+ 2,263,487
Eibenstock	2,867,989	1,81 99	- 476,199
Frankfort-on-Main	8,294,516	7,78 99	+ 506,117
Freiburg in Baden	912,784	1,21 55	+ 354,771
Glauchau	813,157	1,01 79	+ 237,821
Hamburg	15,549,799	15,81 74	+ 304,876
Hanover	1,646,935	2,11 34	+ 538,699
Kehl	1,366,924	1,81 09	+ 468,986
Leipzig	9,750,263	10,91 99	+ 1,173,646
Magdeburg	7,552,883	9,27 71	+ 1,720,486
Mainz	2,379,145	2,77 60	+ 394,415
Mannheim	5,123,901	5,81 00	+ 713,798

District.	1905.	1906.	Gain (+) or loss (-).
Munich.....	\$908,702	\$1,065,979	+ \$157,277
Nuremberg.....	4,919,002	5,705,824	+ 786,821
Plauen.....	5,209,535	6,387,825	+ 1,178,290
Solingen.....	1,835,261	.....	.....
Stettin.....	2,101,269	1,296,842	- 804,927
Stuttgart.....	1,815,793	2,801,442	+ 485,649
Weimar.....	1,826,311	1,716,200	- 110,110
Zittau.....	1,267,937	1,447,287	+ 179,306
Total.....	118,068,378	136,018,634	.....
Increase, 1906.....	.....	.....	+17,950,258

The value of the declared exports for the seven years enumerated is given for purposes of comparison :

1900.....	\$98,812,160	1904.....	\$106,222,968
1901.....	99,887,014	1905.....	118,068,377
1902.....	101,714,064	1906.....	136,018,834
1903.....	120,794,923		

COLONIAL TRADE.

SATISFACTORY GROWTH IN RECENT YEARS.

Consul J. I. Brittain, of Kehl, writes that the German papers are rejoicing over the increase in the commerce between the mother country and her colonies during the past year.

According to statistics recently published by the Strassburger Neueste Nachrichten, Germany's imports from her colonies have increased from \$1,623,160 in 1902 to \$4,231,402 in 1905, and her exports to the colonies from \$5,025,608 in 1902 to \$10,371,088 in 1905. German West Africa exports more to Germany than any other colony, and German East Africa stands next in rank, having almost trebled her sales to the mother country the past three years. No statistics are at hand showing the actual value of different groups of merchandise exported from the colonies, but from the amount by weight of each product fairly exact conclusions can be arrived at. From German East Africa rubber is the leading article of export, 874,720 pounds, worth about \$357,000, having been shipped from there in 1905. Beeswax stands next in line with 697,620 pounds, valued at \$95,200. The exports of coffee from German East Africa have fallen off from 899,580 pounds in 1902 to 795,080 pounds in 1905. Guano, which formerly occupied a prominent place among the exports from south West Africa, has no longer any importance.

Kamerun and Togo have only begun to export anything of importance during the last year. Kamerun's exports amounted in value to \$2,143,904 and those of Togo to \$257,992. Rubber occupied here, as in German East Africa, the principal place, 2,220,020 pounds having been exported, valued at \$1,586,666. Palm nuts and cocoa beans were shipped in great quantities to Germany. Ivory shipments amounted to 60,940 pounds, worth about \$41,650.

There are no statistics from Kiautschou for 1905, but in 1904 coal for the first time figured among the exports along with oxhides. Shantung coal was exported to about \$2,380. Copra is the principal

export from Samoa. The imports since 1904 from the colonies have increased nearly 58 per cent.

The exports from Germany to the colonies have naturally been much heavier than imports from them. In 1902 Germany sent to her colonies exports to the value of \$5,025,574. In 1905 these figures increased to \$10,371,088. To south West Africa she sent in 1905 \$4,383,008 worth, as against \$1,095,514 in 1902. With Samoa during the same period Germany's trade decreased from \$121,142 in 1902 to \$107,100 in 1905. The other colonies occupy intermediate positions in importance between these two, ranging from East Africa, West Africa, and Kiautschou to German Australasia. West Africa and Samoa are the only colonies sending more to the mother country than they receive from her.

PRINCIPAL PRODUCTS EXPORTED.

Among the articles shipped to the colonies, iron, textiles, and beer occupy the first place in weight. Then follow the precious metals, silver leading. East Africa in 1905 took alone over \$476,000 worth. Minted silver to the value of \$166,600 and \$119,000 worth of minted gold were sent to Kamerun. Steel rails and ties were shipped to East Africa to the amount of 27,182,320 pounds in 1905, as against 7,969,280 pounds in the preceding year.

The exportation of locomotives, locomobiles, iron bridges, and machines to East Africa all showed a heavy increase during the year. Naturally, provisions and necessities for the troops in south West Africa played a heavy rôle in the exportations to that colony during 1905. Flour, butter, bottled wine, sausages, cigars, table delicacies, and beer were important articles of export. Twelve million nine hundred and seventy-three thousand eight hundred and forty pounds of beer alone went to south West Africa during 1905. The entire increase in exportations to south West Africa in 1905 can be credited to necessities for the troops. Railroad supplies and iron products all show a decrease during the past year.

To West Africa the principal exports were heavy cotton goods, rough iron, knives, and coal. Here the exportation of certain articles, such as bottled beer and gunpowder, show a decrease over preceding years.

German Australasia takes only textiles, ironware, and bottled beer in appreciable quantities. Samoa purchases dress goods, building materials, and lumber, but Germany's exports thither show a falling off since 1902. On the whole, Germany's commerce with her colonies shows a decided increase, and is very encouraging to the mother country.

COUNTRY'S UTILITY NEEDS.

AGRICULTURAL AND HOUSEHOLD ARTICLES SHOULD SELL WELL.

Consul H. J. Dunlap reports from Cologne that the fiscal year ending June 30 has been one of prosperity to all branches of manufacture and few smokeless chimneys can be seen anywhere in that section of Germany. A general air of prosperity seems to pervade the entire

community, and the absence of idle men and women would indicate that all who desire can secure employment. The consul continues:

The increase of manufactured goods going to the United States from this district has been considerable, from \$3,348,979 in the fiscal year ending June 30, 1905, to \$4,558,686 in 1906, an increase of \$1,209,607. The two principal items of increase were iron and steel. Exports of iron increased from \$38,231 in 1905 to \$631,228 in 1906. Steel increased from \$296,282 in 1905 to \$509,700 in 1906. Much of the former went in the shape of "spiegeleisen" ore and of the latter in structural beams.

I do not see that there is much prospect of increasing sales of American manufactured goods in this district unless manufacturers send men here who are experts, and who can speak the language, with samples. Wide range firing of catalogues and circulars brings down little game, and personal solicitation is almost absolutely necessary to induce orders. In the city of Cologne there is one place only where American-made shoes are sold exclusively. Other stores advertise American-made shoes, but it is a question whether they are really American made or made here in imitation of American styles. The firm in question sells every pair at a fixed price, 16 marks, equivalent to \$4.38. Other stores sell shoes of German manufacture at from 12 to 24 marks, equal to \$2.85 and \$5.71.

ANTIQUATED FARMING METHODS.

There is not much American-made agricultural machinery used in this district, principally because the farms are very small and not adapted to machinery. Most of the plowing is done with one animal and the plows are cheap and usually made by an ordinary blacksmith. The soil being rather sandy, the homemade article polishes after a while and can be easily replaced or repaired when worn out. Much of the harvesting of grain is done with the sickle, and grass is cut with homemade snaths and blacksmith-made scythes. These latter are sharpened by hammering the edge until thin, a grindstone being an unknown aid. It can readily be seen that the cast steel American scythes would hardly give satisfaction if subjected to such treatment.

The smaller tools, such as spades, hoes, forks, etc., are homemade—awkward to handle and heavy—but it would be hard to supplant them with the more graceful and light American tools because there would be a distrust as to their strength and durability; neither could they be repaired by the blacksmith, if repairs became necessary. Haying in this district is a labor indeed. When the weather is exceptionally fine, hay may be made in four or five days, but generally much more is required, for it must often be hung up on stakes to dry and then be stacked around a triangle of poles, which give air circulation to the center, before it is sufficiently dry to be moved away. Harvesting of grain is also frequently a slow affair, the cut grain being first spread out by hand in swaths, then raked by hand and if wet being frequently spread out again. Generally the bands are kept over from year to year and do repeated service. In thrashing, the bands are unbound and stored away, even when steam thrashers are used.

MARKET FOR CHEESE, FURNITURE, AND CANNED GOODS.

I should think that not only this district, but every other in Germany, would offer a good field for the sale of American cheese, pro-

vided it is put into the same form as that from Holland, in cheeses, say from 4 to 6 inches thick and 12 to 15 inches in diameter. Holland cheese sells at retail for 21 to 24 cents per pound, but it must also be borne in mind that the German pound is one-twelfth heavier than the English.

American chairs ought also to find a good market. The German article is stiff and uncomfortable, though the Germans are taught to sit upright and not lounge, which is a favorite American fashion. Rocking-chairs are seldom seen, the usual variety in shops here being made of bent wood in Austria. American chairs shipped in knock down and put together and finished here ought to be sold reasonable. The only American rocking-chair that I have here seen for sale was a secondhand one that in New York would have been dear at \$2.50, but for which the dealer asked \$6, because he said it was an American. American canned goods are seldom found here in any of the shops, and when found are very dear. Two-pound cans of California peaches and two-pound cans of Florida pineapples are held at 3 marks, or 71 cents each. American dried apples and prunes are favorites and are sold in considerable quantities.

A large portion of this consular district is devoted to the culture of grapes and manufacture of wine. This embraces, however, only the hilly and mountainous section, which extends from a little above Bonn to Coblenz, including the numerous valleys which radiate from the river Rhine. Considerable leaf blight and phyloxera have done some damage in sections, both of which are looked after by Government inspectors. Considerable spraying is done with solution of blue vitriol and other chemicals, but rather crudely, to my mind. Hand sprayers are used of rather a crude construction. Whether this might not offer a field for the sale of American-made sprayers, can only be determined by an expert who had made the condition a study. The hillsides being so steep renders the possibility of employing power sprayers out of the question, but a portable machine which deposited the solution quickly and evenly might be used.

SALES IN SOUTH AMERICA.

MAKING GIANT STRIDES IN THE DEVELOPING CONTINENT.

Consul-General Richard Guenther reports, from Frankfort, that German trade interests watched closely the proceedings of the Third Pan-American Convention in session at Rio Janeiro.

The Germans fear preferential tariff rates and other favors being accorded to the United States as probable results of this meeting, whereby American exports would increase and those of the Empire diminish.

For the year 1905 German exports to Uruguay amounted to 21,800,000 marks (mark = 23.8 cents), exceeding those of the year before by more than 90 per cent. In this increase cotton textiles participated with 2,300,000 marks; silverware, small ware, and notions with 3,300,000 marks; and ironware with 1,100,000 marks. In the same year Germany received from Uruguay products to the value of 17,500,000 marks, among which beef extract alone figured at 6,900,000 marks, cattle hides 5,900,000 marks, and sheep's wool and skins 3,100,000 marks.

In 1905 Germany exported to Chile goods to the value of 53,500,000 marks, an increase of about 20 per cent compared with the year before. This comprised almost altogether manufactured articles. Cotton goods contributed 9,900,000 marks, ironware 9,400,000 marks, machinery 7,600,000 marks (2,500,000 marks of which was for locomotives), woolen goods 4,400,000 marks, small ware and notions 2,800,000 marks, and glass and glassware 2,600,000 marks. In the same year Germany imported from Chile raw products valued at 132,900,000 marks, consisting principally of saltpeter 110,700,000 marks, iodine 9,200,000 marks, sole leather 2,700,000 marks, sheep's wool 1,500,000 marks, tin and other ores 1,100,000 marks, and bran 1,000,000 marks.

TASTE OF MOSQUITOES.

HOW VICTIMS ARE CHOSEN—PREFERENCE FOR COLORS.

Consul-General Richard Guenther furnishes the following report on the mosquito and the alleged preference of that sanguinary insect for colors and persons:

It is stated that the mosquitoes are strongly influenced in choosing their victims by the color of their clothes. In 1841 Spence found that a loose fabric of white threads kept mosquitoes away much more effectively than one of black threads. Joly observed in Madagascar that mosquitoes prefer to alight on black soil rather than on white sandy soil, and rather on black shoes and clothes than on white. The natives of Madagascar even suspend pieces of black fabric from the ceilings of their huts in order to attract the mosquitoes to it. Joly also found that light dogs were tormented less by mosquitoes than black ones, negroes more than Europeans. Similar observations were made in India. The Englishmen, Nuttal and Shipley, found that *Anopheles maculipennis* preferred colors in this order: Dark blue, dark red, brown red, black, gray, olive gray, violet green, light gray, pearl gray, pale gray, azure blue, ochre color, white, yellow. The malaria expert, Galli-Valerio, director of the institute for experimental hygiene and parasitology at the University of Lausanne, Switzerland, confirms these facts in his "*Manuel pour la lutte contre les moustiques*," just published, as a result of his own experiments. He states that in experiments with the *Anopheles maculipennis* and *Anopheles bifurcatus*, 119 settled down on dark colors and only 33 upon light ones. Similar results were obtained with *Culex pipiens* and *Culex vexans*; 349 preferred dark and only 120 lighter colors.

PROTECTION AND REMEDIES.

Thus the chances of the number of mosquitoes' bites may be decreased by choosing light colors for our clothes, but they can not be avoided entirely. It is the same with all the remedies used in the open air. Tobacco smoke is the most efficient, but not at all infallible. Camphorated vaseline and other strongly smelling ointments rubbed on the hands are only efficacious until the odor has evaporated, which is done quickly on a hot day. The only certain protection is a veil of muslin gauze such as is worn by the Italian railroad watchmen and soldiers in the malarial zones.

The most rational way is to wage war against the larvæ and eggs of mosquitoes which they deposit in swamps and stagnant waters. This

is best done by means of a thin coating with petroleum. This should be the work of the municipalities or the State.

PERMANENT EXPOSITION BOARD.

Consul-General Guenther makes a further report on the fusion of the three commercial, economic, and manufacturing associations of Germany under one leadership, which was hailed with great satisfaction by the numerous interests which formerly worked separately, and sometimes in opposition:

The new solidified organization has now decided to establish a permanent board for exposition matters which will take charge of all questions concerning industrial, art, sanitary, and other expositions abroad and at home, for the purpose of promoting German interests in this line of economics, and of commercial and productive enterprise. This board will make it its business to obtain timely and full information on all exhibitions projected in foreign countries, thereby being enabled to carefully guide and advise German parties who desire to participate.

FIREPROOFING CELLULOID.

Consul-General Guenther writes that M. Gervain, a French chemist, has patented a process for rendering celluloid proof against fire. This result is obtained by adding to a celluloid mass in course of preparation, when at the highest point of liquidity, a certain quantity of salts—phosphates, bicarbonate of ammonia, or magnesia. Celluloid thus prepared, when touched by fire or a flame, gives forth a gas that checks combustion. Immersion of celluloid in a solution of any of the above-named salts reduces its inflammability.

FIRE EXTINGUISHERS.

OPPORTUNITY OFFERED AMERICAN MANUFACTURERS.

Consul E. L. Harris, of Chemnitz, suggests the possibility of a fairly extensive market for American fire-extinguishing machines and appliances. He suggests the methods by which the markets may or must be secured. He writes:

Fifteen years ago Germany was little advanced in the art of extinguishing great fires in her large cities. To-day, however, practically every city in the Empire has a well-organized fire department, with trained, professional firemen. The whole system is something on the American plan, from which country Germany has learned a great deal in improving and working out plans best adapted to meet peculiar and local conditions. Each country village, too, now has a volunteer fire brigade, where formerly nothing of the kind existed.

A fine new fire-department building has just been erected in Chemnitz, and is fitted up with all the latest improvements and appliances. From press reports from other parts of Germany new novelties and experiments are to be continually introduced in order to complete the existing methods of extinguishing fire. I would advise American manufacturers of fire-extinguishing appliances to address illustrated catalogues to the fire departments in the various German cities, as

I feel sure the same will receive proper attention at the hands of experts, and it is not impossible that a market for the same may be found, contingent, however, upon the condition that whatever is offered really presents something new along the lines in question. If printed in German, the catalogues would have greater value.

FRANCE.

RELATIONS WITH AMERICA.

LARGE INCREASE IN UNITED STATES PURCHASES IN THE FISCAL YEAR.

Mr. Frank H. Mason, consul-general at Paris, furnishes a statement showing the value of exports to the United States from the several consular districts of France for the year ended June 30, 1906, which are compared with the corresponding year of 1905. It will be observed that there was an increase the last year of \$18,912,033, of which \$11,227,205 was in the Paris district. The consul-general explains that the figures do not include merchandise exported in sums of less than \$100, nor do they include the many millions of dollars expended by tourists for articles which are purchased abroad and brought in under the personal-baggage clause of the tariff act. Mr. Mason writes:

The following consolidated statement shows the total amount of exports from France and its North African colonies to the United States, as declared by shippers at the several American consulates during the fiscal years ended June 30, 1905 and 1906, respectively:

	Fiscal year—		Gain (+) or loss (—).
	1905.	1906.	
Paris	\$40,810,478	\$52,037,683	+\$11,227,205
Bordeaux	4,936,729	6,229,713	+ 1,292,984
Calais	4,747,035	7,516,516	+ 2,569,481
Grenoble	1,479,285	2,225,418	+ 746,133
Havre	2,373,019	1,779,747	— 593,272
Limoges	1,742,708	2,010,122	+ 267,414
Lyon	12,668,176	12,002,966	— 665,210
Marseille	6,406,925	8,384,095	+ 1,977,170
Nantes	1,181,049	1,063,318	— 117,731
Nice	1,052,489	1,257,119	+ 204,630
Rheims	6,240,406	6,817,576	+ 577,170
Roubaix	1,943,192	2,487,386	+ 544,194
La Rochelle	963,645	1,149,562	+ 186,017
Rouen	430,448	514,886	+ 84,438
St. Etienne	1,441,601	1,764,440	+ 322,839
Total, France:	88,417,085	107,240,547	+ 18,823,462
Colonies in North Africa:			
Algiers	622,020	719,265	+ 97,245
Tunis	12,599	3,925	— 8,674
Total, colonies	634,619	723,190	+ 88,571
Grand total	89,051,704	107,963,737	.....

Total increase, France and colonies, \$18,912,033.

In this exhibit the statistics of each consular district are treated as a unit, and include the returns from the consular agency or agencies, if any, which are dependencies of the principal office. They represent the wholesale market values declared by shippers in their invoices as presented for certification at the various consular offices. But these statistics do not include the large amount of merchandise which was exported to our country during the year in shipments valued at less than \$100, which require no certified invoice and do not come, therefore, under consular supervision. Neither do they comprise any part of the vast quantity of cloaks, costumes, lingerie, gloves, linen, millinery, etc., amounting to many millions of dollars in value, which are purchased annually in Paris and other French cities by Americans and taken home as personal clothing and effects.

Even with these limitations, however, the teachings of the foregoing tabular statement are striking and suggestive. The increase of \$11,227,205 during a single year in the exports from Paris raises the totals from this district to a point more than 27 per cent above those of any preceding year.

PURCHASES FROM THE PARIS DISTRICT.

The record of declared exports from the Paris district to the United States during the past eleven fiscal years shows the following interesting fluctuations:

1896	\$30,072,236	1902	\$40,556,862
1897	28,468,002	1903	41,217,853
1898	25,943,120	1904	36,624,475
1899	31,892,216	1905	40,810,478
1900	33,015,152	1906	52,037,683
1901	38,834,364		

Among the more important items in the shipments from Paris during the past year were the following: Artist's materials, \$2,755,710; automobiles and parts thereof, \$4,394,388; costumes, \$1,639,258; hides and skins, \$5,512,176; millinery, hats, etc., \$4,565,805; pearls, \$1,621,180; diamonds, \$4,613,484; and perfumery, soap, etc., \$1,184,117, all of which may be classed in the general category of articles of luxury.

Of the other consulates, all except three in France, viz, Havre, Lyons, and Nantes, and Tunis in Africa, show substantial gains in 1906 over the exports of the preceding year. The falling off at Nantes is mainly due to the decline in the sardine fishery, and the diminished shipments from Lyons reflect the fact that the silk manufacture in the United States is growing steadily more competent and effective in supplying the wants of the American people. Rheims shows a total export of \$5,507,255 in champagne during the year, and Grenoble \$1,267,744 worth of kid gloves and \$432,031.11 of walnuts.

PEOPLE'S SAVINGS.

EIGHTEEN BILLION DOLLARS INVESTED IN SECURITIES.

Consul John C. Covert, at Lyon, writes that Alfred Neymarck, a French statistician, has recently made a computation of the amount of

the savings of the people of France that have been invested in different values in the shape of bonds.

He calculates that from 1885 to 1905 the deposits in the great banks of France increased from 912,000,000 francs, equal to \$182,400,000, counting 5 francs to the dollar, to 2,897,000,000 francs, or \$579,400,000. The deposits in the Bank of France during the same period increased from 358,000,000 francs, or \$71,600,000, to 823,000,000 francs, or \$164,600,000. The value of bonds deposited in the banks increased from 3,113,000,000 to 6,930,000,000 francs (\$622,600,000 to \$1,386,000,000). The six great railroad companies of France sold 9,482,465 francs (\$1,896,493) of bonds out of a capital of 4,016,000,000 francs (\$803,200,000) and canceled on their old and new loans 2,164,000,000 francs (\$432,800,000).

From 1880 to 1905 the depositors in the savings banks have subscribed and paid for 4,200,000,000 francs (\$840,000,000) Government bonds. The limit that each person can deposit in the savings banks in France is \$300. The interest on this sum, if not drawn, is invested by the bank in Government bonds. From 1891 to 1903 the same class subscribed for and held 520,000,000 francs (\$104,000,000) of bonds issued by the French colonies and protectorates, 948,000,000 francs (\$189,600,000) of city of Paris bonds, and 925,000,000 francs (\$185,000,000) of local communal and in mortgage and loan companies.

From 1885 to 1905 the deposits in the peoples' savings banks increased from 2,211,000,000 to 3,210,000,000 francs (\$442,200,000 to \$642,000,000), that is to say, an increase of 1 milliard (\$200,000,000), counting 5 francs to the dollar. During the same period the number of the depositors increased from 4,900,000 to 7,000,000 and the possession of the mutual relief societies increased from 56,000,000 to 160,000,000 francs (\$11,200,000 to \$32,000,000). The aggregate value of the stocks, bonds, and similar securities belonging to French capitalists is estimated by Mr. Neymarck to have been at the end of the year 1905 93,000,000,000 francs (\$18,600,000,000), 87,000,000,000 francs (\$17,400,000,000) in 1900, and 74,000,000,000 francs (\$14,800,000,000) in 1890.

SALES AGENTS.

WELL-INFORMED MEN NEEDED FOR FOREIGN SERVICE.

Consul J. Martin Miller, of Rheims, gives an illustration of the importance of manufacturers sending to France as their representatives men who know thoroughly the mechanism of machines offered for sale and who can speak the language of the country to which accredited. He writes:

Two leading American typewriting machines were recently placed in a business house here for trial. One of these machines had the advantage of its competitor in reputation, but the least known and undoubtedly the inferior machine had the greater advantage of having a live representative, a German with an American business education and a knowledge of the French language. This agent explained to the head of the firm and the operator on the typewriter all attachments and improvements and how the machine would write in two colors by simply shifting the ribbon. The clever sales agent was on a cam-

paign of education, and he made the sale over the native French agent who had a machine with every improvement and, in fact, advantages the other did not possess. The prospective customer, however, was ignorant of these, and the French agent was not educated in the art of explaining what he had in the way of a wonderful American labor-saving invention.

The successful business of the great agricultural implement establishments, as well as that of the typewriter machines, typesetting machines, cash registers, sewing machines, printing presses, and other great manufacturing concerns of the United States, demonstrates that it is absolutely necessary to recognize the business conditions of these countries and meet them cheerfully. Do not expect to ride roughshod over local traditions and customs. American goods can not be sold that way. After you have made up your mind to this, set about upon a persistent and energetic campaign of education by showing the articles to be introduced among the people with whom it is expected to build up a trade. This work can be supplemented by the American firm using the language of the country in their letters and circulars. But no matter how high your agent here may stand in the commercial world, if he does not thoroughly understand your article and is not prepared to properly explain it he can not succeed. Particularly is this true of mechanical productions.

LAUNDRY METHODS.

MODERN MACHINES UNKNOWN—PUBLIC WASHTUBS AND BATHS.

Consul Miller also describes the methods of performing laundry work in France, and incidentally points out that American enterprise properly directed might introduce refrigerators, washing machines, and other modern articles that are used in the United States. He writes:

That a demand should be created in France for scores of articles of American inventive genius and mechanical skill is reasonable to suppose. For instance, the common household refrigerator so universally used in the United States is unknown in France. Only the very wealthy families can afford the expensive refrigerators to be had. It is the same with water filters—the plain people do not use them. Washing machines and clothes wringers, such as are in common use in the United States, are not known here. In fact, the conditions do not seem to be favorable for their introduction. The family wash in France is done away from the home, at one of the *lavoirs publiques* provided in every town and city.

One of these establishments is owned by the city of Rheims and there are others conducted by individuals. The *lavoir municipal* accommodates about 300 washerwomen at one time, and the others from 20 to 50 each. Each woman has a stall, which is rented, including water, at 5 centimes, or 1 cent, per hour. Here she lays the garments on a piece of wood, beats them with a club, the same as did the washerwomen of a century ago. In some cases she may scrub the clothes with an ordinary scrub brush, using soap. Some of the municipal establishments have large machines for washing and for drying, for which they charge the washerwomen a nominal price by the piece. They are run by steam or electric power, but are in use only in the

larger cities. A revolution in laundry methods must take place before there can be a market in France for our washing machines.

PERIPATETIC BATH TUBS.

Several bathing establishments in Rheims, and this is true of other French cities, have portable bath tubs, which are placed on two-wheel vehicles provided with a large iron boiler filled with hot water. As orders for baths to be delivered at the doors of the residences are received the boilers are filled with hot water and the bath-laden vehicles, each pulled by two men, start out for the delivery. The bath tub is filled with the hot water and carried into the residence, and while the family bath is going on the vehicle may fill another order, returning again for the tub, which is in regular commission as a visitor to the residences throughout the city. The price of a delivered-at-your-residence bath in Rheims is 30 cents, while at the establishment it costs 20 cents.

Rheims has a public bath in connection with the *lavoirs publiques* owned by the city, where the nominal charge of 4 cents is made for baths. There is a section for people having *maladies*, where sulphur baths are given at 6 cents each. There is a separate section of the same kind for women.

RAT DESTRUCTION TO PREVENT PLAGUE.

Consular Clerk Hernando de Soto, of Paris, forwards the translation of a French decree regarding the destruction of rats on vessels entering French ports. It applies to ships arriving from ports infected with plague, which shall unload more than 50 tons of merchandise. The fees and expenses arising from the destruction of the rats by the authorities must be paid for by the ship.

ITALY.

EMIGRATION MOVEMENT.

LARGE INCREASE TO THE UNITED STATES.

Consul Paul Nash, of Venice, furnishes an interesting report on emigration from Italy based on the annual report of the commissioner of emigration for the year ended April 30, 1906. He writes:

The number of emigration passports issued by the Italian Government for the past two years is shown in the following table:

	1904.	1905.	Increase.
United States.....	168,789	316,797	148,008
Argentina.....	51,779	86,158	34,379
Brazil.....	19,724	30,079	10,355
Other American countries.....	9,282	11,690	2,408
Total.....	249,574	444,724	195,150
Europe, Asia, and Africa.....	221,617	281,607	59,990
Total.....	471,191	726,331	255,140

These figures do not represent the actual number of emigrants embarked, and, particularly in regard to trans-Atlantic emigration, they must be reduced considerably. According to the reports of the steamship companies engaged in this kind of transportation from Italian ports and from Havre, the total number carried to the United States in 1905 was 264,990, against 150,119 in the preceding year, but to these figures must be added the fairly large number of those who embarked at other ports outside of Italy, which brings the totals much nearer the totals of passports issued.

CHARACTER AND VALUE OF THE EXODES.

Italian emigration is to a surprising extent temporary, and depends upon the season of outdoor labor. For example, of the 266,982 persons to whom emigration passports were issued last year for European countries, probably over 90 per cent of those who actually went returned last autumn, or, having departed this spring, will come back in November, when there is no longer the same demand for laborers. Indeed, this characteristic holds good also in trans-Atlantic emigration, and is strikingly demonstrated by the crowded steerages of the Mediterranean and French steamers sailing from New York toward the month of December. This tendency to return is of the utmost value to Italy, and is encouraged by the authorities, who realize that but for it the 99,598,816 lire sent from abroad in the past four years through the Bank of Naples alone for the families of emigrants, or for deposit in the state savings banks, would have been very much less, and that if emigration were more permanent in character this important item in the finances of the country would diminish instead of increase. Of the 38,417,886 lire, equal to \$7,503,493, transmitted through this bank in the past year, \$4,257,680, or about 57 per cent, came from the United States. The report does not estimate the total amount sent, but states the average per capita of emigrants to be 150 lire, equal to \$29.30. Therefore, taking the bare number of emigrants to the United States as reported by the steamship companies herein referred to, the total amount sent would be about \$8,000,000, and the calculation based upon the number of passports issued would give about \$1,500,000 more—enough to feed some 20,000 families of five persons each of this class of southern Italians for one year.

EFFORTS TO REMEDY ILLITERACY.

In its discussion of emigration to the United States, the report of the commissioners speaks enthusiastically of the meeting of the National Civic Federation recently held in New York and of its attitude toward the bill for the exclusion of illiterate immigrants, which was at that time before Congress, and which threatened a valuable source of Italian revenue. It also comments upon the proposal in the President's message of last December, to hold an international conference for the discussion of these questions, and applauds the idea as tending toward a better understanding of them.

There are more than 3,000 communal committees for the encouragement of emigration scattered throughout Italy, and what are known as *istituti di patronato*, or associations for the instruction and protection of emigrants, have sprung into existence in various centers with-

out direct aid from the Government. In the year 1904-5 the sum of 50,000 lire was allowed from the emigration appropriation for the establishment of night schools for illiterates intending to emigrate, and numbers of these were opened in the south, where the percentage of illiteracy is enormous. This movement was started by the menace of the exclusion of illiterates from the United States; but now that the danger is past, these schools are to be discontinued. The authorities also publish and distribute pamphlets on the subject of emigration, particularly of that to the United States.

There is a decided tendency on the part of the commission to discourage emigration to the northeastern States in favor of the West and South, and as emigrants are under the direct control of the authorities from the time they announce their intention of emigrating until they are landed, we may expect to see the tide turn more strongly in the direction of the States where it is most needed. As it is, over 95 per cent of the total number of emigrants remains in the northeastern States, where they are least desired.

IMPROVING TELEPHONE SYSTEM.

MOVEMENT PROVIDES OPENING FOR AMERICAN DEVICES.

Consul Nash also reports that the telephone service in Italy, both urban and intercommunal, has hitherto been almost entirely in the hands of two great companies—the Societa Alta Italia, operating in Milan, Genoa, and Turin, and the Societa Generale Italiana pei Telefoni ed Applicazioni Elettriche, controlling Bologna, Florence, Rome, Naples, and the Sicilian towns.

In the beginning of 1904 the ministry of posts and telegraphs took over the Venice telephone system, extending the service, raising the pay of the employees, and reducing the rates, but, in spite of increased expenses, putting aside some \$12,000 a year toward a fund for the changing of the entire system. The time has now come when bids for this change are being made, and already three have been received—one from an American, one from a French, and one from a German firm. These bids are yet to be submitted to the ministry at Rome by the local director, and there is still time for other American firms to compete if they act promptly.

ROME WILL BE MODERNIZED.

The ministry of posts and telegraphs recently appointed a commission to investigate the telephone service throughout the country, with the result that in many places a complete change was found to be necessary. In Rome, for example, the service was found to be extremely bad, and that town will probably be one of the first to be modernized in this respect. The appointment of this commission was the first step in the project of the ministry to take over control of the telephone service of the whole country. Thus the moment seems most propitious for investigation by our manufacturers, and because the Government will undoubtedly prefer a uniform system throughout Italy an immense business might possibly be the reward of the successful bidder for the modernization of the service in the first large towns in which it is undertaken under Government control.

AMERICAN APPLIANCES USED.

The director of the local exchange tells me that the American system known as the "batteria centrale," which I understand to be that in which miniature electric lights are used in the switch board, instead of the antiquated drop indicator, and the concentration of the batteries at one point, is in use at Milan, and that as it gives perfect satisfaction the tendency will be to adopt it generally. He also says that of the three propositions already submitted to him for the new exchange in Venice that of the American firm seems to be the best, and that although the actual choice does not rest with him he believes the minister will award the contract to this firm, provided, of course, nothing better is forthcoming.

American desk telephones should find a ready sale in Italy. The only thing of the kind in use in Venice is a French production known as the Bailleux-Ader, which, although excellent as far as mechanism is concerned, is inclosed in a large wooden box, and is too heavy and cumbersome for convenience. It has, however, one good feature—the combination of the transmitter and the receiver on one handle. This is said to maintain the lips at the proper distance from the transmitter, besides having the advantage of leaving one hand entirely free.

PENINSULA'S CAPITALISTS.

ATTITUDE TOWARD AMERICAN INVESTMENTS.

Consul James E. Dunning, of Milan, writes in response to an inquiry sent to him from one of the larger cities of the Southern States, that Italian confidence in American business integrity and resources has not been impaired, but that at the present time Italian capitalists are not in position to place investments in the United States. The consul writes:

There is no opportunity in Italy at present for Americans desiring to effect a connection with some loan or insurance company, or other financial institution, that might be induced to invest in American securities, for the purpose of lending their money on improved plantations in Mississippi, Louisiana, and Arkansas. The consulate has not only given this particular inquiry special attention, but has been acquainted with the efforts of other Americans, similarly engaged, who have visited Italy with the expectation of floating security of this character, and who have failed to accomplish their purpose. My information is so intimate and direct that I unqualifiedly advise against further efforts of this kind.

Italy's wealth, though great, is not yet adequately expressed in terms of money. So much of the country is as yet short of its best development and the nation is still such a comparatively short way on the road toward financial and commercial maturity that such surplus as accumulates in the money centers, of which Milan is of course the chief, is instantly demanded to sustain the rapid industrial expansion, which is the principal fact in the present-day history of the peninsula. In my opinion the commercial danger in Italy is the danger that this expansion will acquire a rapidity and scope disproportionate to the

ability of the country to take care of it. I do not believe it is a serious danger. No government in the world is in the hands of wiser, more farseeing, or more rightly conservative men. Financial institutions do business on a moderate scale and are satisfied with moderate profits. But the danger is there. Constantly increasing calls are being made on Italian banks and other financial enterprises for loans intended to enable Italian manufacturers to enlarge their output. In every part of the country where money is plentiful, or can be had plentifully at reasonable rates, this is the common condition of the case at present, and it is particularly true of Milan. I mean to say that on one side is a limited amount of surplus capital and on the other almost daily opportunities to invest it in local mortgages secured by first-rate real estate and a fixed and familiar business reputation. I think my point is made clear.

CONFIDENCE IN UNITED STATES.

It is further true that Italian investors are not over interested in American opportunities of the character mentioned by my inquirer. It is eminently and even ridiculously untrue that any of the recent public discussions of insurance, railroad, and other businesses in the United States have in the least impaired foreign confidence in American stability and resources. My observation in southern Europe is that quite the reverse is true. Such lack of faith as there may be, and there is a measureable quantity, is applied wholly to enterprises of the nature mentioned above—farm mortgages, agricultural improvements, land development, and mines—and the hesitation is due both to the inborn reserve of the Italian toward foreign enterprises of all kinds and to the infinitely larger scale upon which American affairs are conducted. The Italian, even of the most advanced financial school, finds himself bewildered by many of the propositions put to him in the utmost good faith by Americans who forget that in the United States all things of this character are magnified in about the same proportion as in Italy they are diminished. Where the Italian talks business in lire the American has no patience with anything not expressed in dollars.

Hence I believe there is no demand for American securities of this class in Italy, on account of the ready opportunities for placing loans at a good rate on local mortgages, and that even as Italy's money surplus increases there should be no great expectations as to this class of business between the two countries.

MANUFACTURERS ARE BORROWERS.

Italy's manufacturers are at present a debtor class; that is, as a class they are borrowing money with which to increase their output and keep pace with the wonderfully rapid growth of the country among the nations. It is a healthy condition, since it affords Italian capital a perfectly safe and agreeable field in which it can at once perform a noteworthy service for the country and return a satisfactory rate of interest to the bankers. Special discount brokers scarcely exist in Italy. Banks do all that sort of thing with their customers. In special cases a commission is charged over and above the interest in these transactions, and though the official rate of interest is 5 per cent the market usually approximates 4. Accommodation paper with

one or two names takes from 5 to 5½ per cent interest, and all these rates are varied according to time, circumstances, and the character of the indorsers.

The principal Italian banks have paid in the last few years annual dividends ranging from 6 to 8 per cent. They are rather heavily taxed—from 10 to 12 per cent—on profits, in addition to stamp duties.

KINGDOM'S MARKETS.

AMERICAN GOODS WHICH MAY BEST SUCCEED.

Conditions and prospects for American goods in the Milan consular district is the subject of a report from Consul J. E. Dunning, who writes:

The Milan district comprises the active and populous Provinces of Milan, Como, Brescia, Cremona, Sondrio, Parma, Mantua, Pavia, and Piacenza, with a total population of about 2,000,000. Electricity as motive power is rapidly supplanting steam, and is furnished by a steadily increasing number of water-power plants in the northern hills. Including new installations and conversions from steam to electricity, about 20,000 horsepower a year is being added to the mechanical equipment of the district. American manufacturers who can supply machine tools and that class of imports are profiting by the industrial activity. The field continues fertile. German and Austrian competition have had their day in Milan among the experienced manufacturers, who have found and admit that the American machine, at its higher cost, offers a certainty and uniformity of result which, since they can be attained in no others, renders it the cheapest in the end. In Milan it is the American machine which is relied upon to effect that new hold upon their own market, which is the prime object of the Italian manufacturers.

Trade in several American lines remains undeveloped. American canned goods ought to be exploited experimentally. For many years it might be a limited field, but a good one in the end as the district grows in wealth and in the education and betterment of its population.

American agricultural machinery ought to be introduced more extensively. Here is a difficult proposition, involving a programme of education. Fruit and poultry could be bettered in quality and market value by the use of American appliances and American methods, but to introduce these things will mean a long campaign. American boots and shoes might have a field here. There is need of a better shoe than is now offered, which is poor in quality and high priced. The Italian \$3.50 shoe is decidedly inferior to the American \$2 shoe, both in style and wear. The American dressmaking materials, and more particularly foundations for girdles and stocks, and American waists for young women and children, are a field which should be worked. American automobiles and automobile fittings have no opportunity here excepting in special cases. Nor have American toilet articles much opportunity among purely Italian buyers, on account of the sharp competition of the Italian and French manufacturers. Advertising is an important feature of this trade, and no American maker could afford to follow the European experts in that direction in a city like Milan. There is a limited market here for this sort of trade among American and English travelers. The Italian demand calls

for the highly scented, over-sweetened articles, not much in favor in the United States. Small articles, like safety razors, could be pushed in Milan harder than they have been by urging the element of personal economy. Indeed, it is always of value to remember here that one is dealing with an exceptionally thrifty people, who make a habit of taking account of sums which to the American mind seem ridiculously small.

GREAT BRITAIN.

EXPANDING COMMERCE OF KINGDOM.

INCREASE IN EXPORTS AND IMPORTS FOR THE FIRST HALF OF THE YEAR.

In the first six months of 1906 the United Kingdom increased its imports to the extent of \$121,000,000 over the corresponding six months of 1905. Nearly one-half of the increase was in raw industrial materials. But the showing in that respect is not quite so good as it looks, since it was to no inconsiderable extent accounted for by the higher prices paid for cotton, wool, copper, and other raw materials used in manufactures. Thus, raw cotton, which exhibits an increase in value of about \$15,000,000, shows a decline in quantity of 1,187,000 hundredweight (1 hundredweight = 112 pounds in Great Britain). There was an increase in the value of the imports of food, drink, and tobacco to the extent of \$27,000,000, and of manufactures to the extent of \$42,000,000. The increase in the value of the importations of articles of food is said to be due to a considerable extent to the larger purchases of Indian corn and higher prices paid for oats and barley. It is said that about 50 per cent of the advance in the imports of manufactures is attributable to semiraw materials for manufactures and is not a little traceable to the rise in the price of copper and tin.

In the exports, which showed an increase for the first six months of nearly \$121,000,000, or 15 per cent, the chief item of increase was in manufactures, the increase amounting to \$97,000,000. Of this total nearly \$16,000,000 was in iron and steel and only \$9,000,000 in machinery. Cotton yarns and piece goods showed an increase of \$19,000,000, while woollen and other materials of that nature showed over \$10,000,000 increase. There was a gain of about \$16,000,000 in the exports of new ships, which is said to be very gratifying to the British. Altogether, according to the British newspapers, the public of that nation regard the situation as in every way satisfactory.

A GREAT DOCK.

GRIMSBY WILL HAVE THE FINEST ON EAST COAST OF ENGLAND.

Consul W. C. Hamm, of Hull, says that the new dock at Grimsby, which has just been begun, will be the finest on the east coast of England, equipped with all modern improvements and capable of accommodating the largest vessels now afloat.

The new dock, when finished about five years hence, will be 1,100 feet square, with a bay or arm, 1,250 feet long by 375 feet wide, at the southwest corner. The main dock and arm will have an area of 38½

acres of water. Provision is made for future developments of three other bays, or arms, at the corners, bringing the total dock area to 71 acres of deep water. There will be 6,760 feet of quay space in the main dock, which will be brought up to 14,110 feet, when the four bays are completed. In all, 616 acres have been acquired for the dock, of which 79 acres will be water space, and the remaining 537 acres for land about the dock when completed. There will be a railway $4\frac{1}{2}$ miles long, constructed from Immingham to the existing company's line at the Ulceby junction, and additional railway accommodation is to be provided by a light railway which will run from Grimsby to the dock site, which is already practically finished.

The depth of water in the dock will be $35\frac{1}{2}$ feet below high water at spring tides and 32 feet below high water at ordinary neap tides. The entrance lock, which is to be funnel-shaped, will be 850 feet long and 90 feet wide, with $47\frac{1}{2}$ feet of water at high tides, 44 feet of water on the sill at neap tides, and 28 feet at low tides. Vessels of deep draft will thus be able to enter or leave at any state of the tide, as the deep-water channel of the Humber passes close to the entrance, and it will only be necessary to dredge for about 300 yards across the fore-shore to gain access to it. The entrance channel will be flanked by jetties, and here deep water will always be available, so that vessels may go alongside at any state of the tide, thus affording special facilities for passengers and for bunkering coal. The site is an ideal one for a deep-water dock, as there are no expensive reclamation works to be undertaken and the deep-water channel runs close to the site. It is claimed that no other docks on the east coast will afford such facilities.

This new dock will be of special interest to Americans, because three centuries ago the Pilgrims gathered only a mile from this spot to await a Dutch vessel which would carry them to Holland.

SHIPBUILDING IN SCOTLAND.

In the first half of the year 1906 Scotland produced an amount of tonnage from her shipyards unprecedented in the history of shipbuilding. In these six months, according to a Glasgow dispatch, the shipyards put into the water no less than 207 vessels of all sizes, with an aggregate tonnage of 360,489. The nearest approach to that record was made in Scotland in 1902, when in six months 259,804 tons were produced. The large output from the Clyde yards was augmented by the launches of the *Lusitania*, a Cunard steamer of 32,500 tons, and the *Agamemnon*, a battleship of 16,500 tons, in the closing weeks of the half year.

INDUSTRIAL NOTES.

GENERAL PROSPERITY EXHIBITED IN TRADE LINES.

Consul F. W. Mahin contributes the following interesting news topics from Nottingham:

Among the many signs of the return of good times to this country is the improved business of British hotels, which set in toward the end of 1905, and has since been very marked.

Iceland and the Faroe Islands will be connected by cable with Great Britain toward the end of August. Iceland is also constructing a system of land telegraph lines, to be completed by October 1.

The number of business failures in Great Britain for the first seven months of this year is 5 per cent less than during the corresponding period of 1905—another indication of the improved trade conditions.

A novel and improved fog signal is just installed at the Needles light-house, Isle of Wight. It consists of a set of reed trumpets, worked by compressed air, and can be started instantly when fog descends, giving a blast five seconds long every fifteen seconds, which can be heard 10 miles—treble the distance of the old fog-bell signal.

Official statistics show an increasing number of cattle and a decreasing number of sheep and hogs in this country. In view of the multiplication of automobiles and motor omnibuses these statistics surprise the reader with the information that the number of horses steadily increases in Great Britain.

BELGIUM.

THE GLASS INDUSTRY.

HEAVY EXPORTS TO AMERICA—PRESENT MARKET CONDITIONS.

Consular Agent W. D. Shaughnessy, of Charleroi, advises that the situation of the Belgian window-glass market is assuming a troublesome aspect.

Prices are declining and several factories are only producing for their warehouses, notwithstanding that they already contain very large stocks. This unsettled state is due to falling off of usual orders from nearly all important export centers and demands of the others for small amounts. Further orders are not expected for some time. The stock at the works is therefore increasing in spite of the fact that eleven factories are closed for much-needed repairs. Operators are also confronted by demands of workmen for less hours and 15 per cent increase in wages. Unless an agreement is effected it is expected that the men will declare a strike in September, at which time the present contracts expire. The trouble arose over the application of a Belgian law which gives to men working at blast furnaces one-half holiday per week. The labor union claims that this law does not apply to them and that they are entitled to a whole day, the companies opposing it. Orders have been issued to members of the union not to renew their contracts for four months, nor even for one day, unless satisfactory agreements are made with the companies. As the labor is 50 per cent of the cost price, the companies claim they can not afford to pay higher wages, stating that they are losing money.

This does not apply to the plate-glass market, as the trust controlling all the plate-glass works has been able to keep the market firm and uphold profitable prices. It is the desire of the window-glass companies, after the present troubles are settled, to also form a syndicate.

EXPORTS TO UNITED STATES—WINDOW-GLASS CLASSIFICATION.

The manufacture of glass under its numerous and diversified applications is one of the most important branches of industrial activity of

Belgium, and is most thickly settled in the basin of Charleroi. The export of window glass to the United States for the fiscal year ending June 30 amounted to \$1,053,823, against \$328,579 during the same period of 1905, an increase of over 70 per cent. In plate glass the export to the United States for the fiscal year ending June 30 was \$834,955, against \$483,425 in 1905, an increase of nearly 50 per cent. Window glass is classified according to thickness, as follows:

Class.	Weight in ounces per square ponce.	Thickness in millimeters.
Glass for photography	14	1.5
Plain glass.....	15 and 16	1.6 and 1.7
Semidouble glass	21	1.8
Double glass	24	1.9
Treble glass.....	26	2.0
	28	2.1
	32 and 36	3.5 and 3.9

The qualities usually manufactured are of 14 to 28 ounces, viz, of 1½ to 2 millimeters thickness. Window panes are made of white or colored glass and are plain, straited, or fluted, and diamond shaped. Metallified window glass is also manufactured as well as mousseline—obtained by engraving with sand blast. There are 25 window-glass works in Belgium, all in the province of Hainaut, three of which are controlled by American companies. The annual production amounts approximately to about 30,000,000 square meters, 90 per cent of which are exported.

PLATE GLASS AND BOTTLES.

After being polished, plate glass varies in thickness from 4 to 10 millimeters. The sizes most commonly used are from 6 to 8 millimeters, and beyond 10 millimeters they are used as slabs. The factories supply rough plates, ground or polished plates, white, colored, opaque (imitation of porcelain or marble), black, opal, engraved and beveled plates, and engraved slabs. There are seven plate-glass factories in Belgium (five in the province of Hainaut and two in that of Namur), which turn out annually from 1,000,000 to 2,000,000 square meters, nine-tenths of which are exported principally to the United States, England, France, and other countries.

Bottles are manufactured in four works, all in Hainaut, producing annually about 10,000,000 bottles, nearly all sold in Belgium. Bottles are produced for wine, beer, liquor, etc.; also balloons and large bottles for corrosive liquids.

GLASSWARE AND CRYSTAL.

This industry comprises all hollow ware excepting bottles, and is divided into three classes—ordinary table glass, made of common glass; semicrystal, of finer glass, and crystal, which is made up of an entirely different composition. The extensively developed factories turn out a number of objects of all patterns for domestic use, such as glasses, saucers, decanters, saltcellars, etc.; glassware for laboratories in ordinary or tempered glass; for electricity and lighting; reflectors and lenses for the navy, etc., and commodities suitable for answering all demands, from the plainest current articles to objects of cut crystal.

Molded articles are successfully turned out, imitating hand-cut crystal, of which constant endeavors are made to produce elegant models. Ornamentation is applied by numerous processes, such as wheel engraving or grinding, which allows the most artistic outlines; engraving, with the aid of acid, to reproduce geometric designs; frosting, application of white enamel, by hand painting and gilding. There are fifteen goblet and crystal manufactories in the provinces of Liege, Namur, Hainaut, and Antwerp. The annual production amounts to more than 100,000,000 pieces, four-fifths of which are exported.

MEDALS FOR SERVANTS.

BELGIAN GOVERNMENT HOLDS OUT REWARD TO WORKERS.

J. C. McNally, consul at Liege, reports that no emolument arising from labor is more sought after by the Belgian workingman than is the industrial decoration conferred annually upon a certain number of workingmen who have performed good and faithful services to one firm or employer for at least thirty years uninterruptedly.

This system has had a healthy influence upon the male portion of the working classes, and to further stimulate stability and continued service on the part of house servants, who were not included in the above, a royal decree was issued on June 15 conferring the same privilege upon house servants who have for a period of twenty-five years served one master, or have been in the same family and merited from them the required recommendation for faithful and devoted service. The candidate must be at least 45 years of age. The servant question in Belgium presents the same difficulties as in other countries, with the exception that the servant comes on probation for eight days. If in this time she does not prove satisfactory, she can be dismissed without notice. If she is retained beyond that time, eight days' notice must be given on either side before leaving.

FUTURE ECONOMIC NECESSITIES.

Consul McNally also reports that M. Carton de Wiart, a leading member of the Belgian congress, offers interesting suggestions for the maintenance of Belgian importance in the world's markets. He says that the cost of Belgian labor is increasing, while the usefulness is diminishing. Technical and primary instruction must be inaugurated, the chambers of commerce and boards of trade reorganized, while Belgian representatives abroad must receive an industrial and commercial direction. Commercial countinghouses must be established and foreign credits created by the formation of branches to established financial institutions. Belgian products must be carried to foreign markets in Belgian boats, while the whole merchant marine must be put into a working condition.

SWITZERLAND.

COMMERCE WITH AMERICA.

UNITED STATES FAILS TO KEEP PACE IN INTERCHANGE TRADE.

Consul Henry H. Morgan reports from Lucerne on the commerce of Switzerland for the first three months of the calendar year 1906, which he states amounted to \$113,115,800, of which \$62,878,184 were imports and \$50,237,616 exports. This shows an increase over the 1905 period of \$5,159,358 and \$5,983,912, respectively.

The commerce of the country with the United States for the period under review amounted to \$9,579,892, of which \$6,464,453 were exports and \$3,115,439 imports. The greatest increase in purchases from America was in oils and fats, which advanced from \$89,583 for the first three months of the calendar year 1905 to \$477,223 in the 1906 period, or more than one-third of Switzerland's imports of these articles. Raw cotton is the largest item of purchase from America, amounting for the first quarter of 1906 to \$1,435,553. Foodstuffs, tobacco, and wines figured at \$537,296, an increase of about 5 per cent, while machines and vehicles amounted to \$64,915, a decline of \$11,091 from the 1905 period.

On the other hand Switzerland made increased sales of machines and vehicles to the United States, the figures for the 1905 quarter being \$19,862, and for the 1906 quarter \$54,195. Swiss cotton goods were shipped to the United in the 1905 period to the extent of \$2,584,069, and in the 1906 period over 40 per cent more, or \$3,696,290 worth. Silk goods declined a little, to \$1,305,561. Watches and clocks advanced about 25 per cent, to \$342,771, chemicals amounted to \$291,558, and millinery \$127,513. On the whole, while the American sales to Switzerland remained normal for the quarter named, Swiss exports to the United States increased by \$679,091 over the 1905 period.

MACHINE INDUSTRY.

MARKED INCREASE—UNITED STATES BACKWARD.

A special agent of the Treasury Department sends the following report on the import and export of machinery by Switzerland:

According to the report of the Swiss Machine Industrial Association the entire returns for 1905, export as well as import, show a more distinct increase than has ever been observed in past years. It is evident that a part of this increase in the export and import in the year 1905 is to be accounted for by the rise in the duty, which came into operation—in Switzerland as in other countries—in the year 1906. Another part of it may be placed to the account of the augmented demand in consequence of favorable trade balances, especially in Germany, but also in Switzerland itself. The principal share in the rise in prosperity of the Swiss export falls to the dynamo-electric machines, and in general to the products of machine building.

The number of operatives engaged in the machine industry in the little country of Switzerland during 1905 is 31,313, as against 27,389

in 1904, thus showing an increase of $12\frac{1}{2}$ per cent. From the statistics published by the customs direction in chief the imports were valued at \$7,175,682, with an increase of \$1,958,353, about 27 per cent, and the export at \$10,874,855, with a surplus of \$1,357,898, about $19\frac{1}{2}$ per cent, an amount which far surpasses all previous figures.

Of the total imports in the year 1905 $70\frac{1}{2}$ per cent came from Germany, as compared with 74.8 in 1904. On the other hand, the machine export to that country for the same period shows a rise of 24 per cent in 1904, as compared with 26.2 per cent in 1905. France imported in 1905 8.3 per cent against 7.7 per cent in 1904, and received in exchange in 1905 19.1 per cent against 15.1 per cent in 1904. Italy sent in 1905 1.8 per cent against 1.5 per cent in 1904, and received in exchange 18.7 per cent in 1905 against 18.2 per cent in 1904. Russia took in spite of the war and the troubles in the interior of the country in 1905 7.4 per cent against 9.3 per cent of the previous year. All the other countries not named yielded in 1905 17 per cent of the Swiss demand compared with 12.9 per cent in 1904, and drew in return only 23.9 per cent of the total figures for 1905, as compared with 28.3 per cent in 1904.

The United States is unfortunately very little interested in the Swiss machine trade, which might be of such immense importance if capable firms would take the initiative in an intelligent manner. The only export to the United States worth naming is that of embroidery machines, amounting to \$84,845. The import of American machines to Switzerland is hardly worthy of mention.

PORTUGAL.

ENTRY TO COLONIES.

REGULATIONS FOR RESIDENCE OF FOREIGNERS.

Mr. Charles Page Bryan, minister to Portugal, furnishes the regulations recently promulgated by the Portuguese Government for the entry and residence of foreigners in its colonial possessions. It is provided that—

Foreigners are freely admitted into the colonies without a passport or any other document. They are, however, required to present themselves within three days after arrival to the administrative authority of the place where they entered the province in order to secure a legal residence.

The Government may take exceptional measures, when the good of the State demands it, to restrict the free admission of foreigners.

A legal residence may be acquired by presenting a certificate of nationality approved by applicant's consul, or a passport, which, when approved by the administrative authority of the district where the foreigner proposes to settle, shall constitute a right of permanent residence.

In default of a certificate of nationality or passport, a legal residence may be acquired through a sufficient bond.

The document which constitutes a legal permission of residence,

when viséed by the proper consular officer and by the administrative or police authority, shall serve as a safe conduct or permission for free transit if the foreigner change his residence within the province or leave by land or sea.

Foreigners who do not secure a legal residence or present themselves to the administrative authority within the time prescribed shall undergo a fine of from 5\$000 to 20\$000 reis, and if they do not then secure a legal residence they may be obliged to leave the country within the time fixed by the governor.

If the foreigner remain in the province after he has been ordered to leave, he shall be forcibly expelled and shall be conducted to the frontier by the public authorities.

An expelled foreigner reentering the province shall be captured and imprisoned for not less than fifteen days or more than six months, and shall be again expelled.

The fee for a legal residence shall not exceed 500 reis, inclusive of the proper stamp, all official registries, visées, and references being gratuitous.

AUSTRIA.

BOHEMIAN MARKETS.

SALES METHODS FOR AMERICAN GOODS.

In his annual report Consul Ledoux, of Prague, furnishes the following excellent advice to American manufacturers and merchants in regard to succeeding in the markets of Bohemia. He says:

With proper sales campaigns the trade in American boots and shoes, office furniture, stationery, office specialties, machines, tools, canned meats, canned vegetables, canned fruits, kitchen utensils, hats and caps, shoe polishes, shoe-store fixtures, general store fixtures and specialties, electrical apparatuses, etc., can be much increased, and markets created for many other lines of American goods.

Everything should be made plain and easy for the buyer. This is the cardinal point. American exporters should seek him; not he the exporter. American goods should be somewhat adapted to local customs, and not local customs be always forced to adapt themselves to American goods. The buyer should not be forced to learn the English language in order to understand American commercial literature, nor to transform himself into a regular conversion table of weights, measures, and moneys. He should be given a chance to see samples of the goods before buying, or verbal descriptions and explanations should be given him by persons having full knowledge of their fortes. Middlemen's profits should be reduced in volume and number; where possible abolished altogether. Reasonable credit should always be extended where the commercial standing of the buyer justifies it; and, by the way, the seller should himself secure all credit information and not force the buyer to furnish it.

SPAIN.**POOR FRUIT CROPS.****OUTLOOK NOT CONSIDERED FAVORABLE.**

In response to inquiries from parties in California, Consul D. R. Birch, of Malaga, furnishes the following information about the fruit crop in Spain:

The outlook for the opening of the fruit season of southern Spain next month (September) is less hopeful than was anticipated in the early spring. Almonds will be fewer, the raisin crop is two weeks late, and olives are prematurely ripening and falling from the trees. "Jordans," that luscious almond wholly indigenous to the environs of Malaga, will be fewer to the extent of perhaps 60 per cent, if the recent reports from the growing districts are to be believed. The unusual cold of last winter is held responsible for the shortage. Large fruit will prevail, and although the smaller sizes are most in demand in the American market, the managers of the almond trust say the prices for the coming season will not be much affected by the above conditions.

Fears are entertained that the early autumn rains, which come late in September, will damage the drying raisins. The fruit is abundant, though late in ripening, and if the rains hold off until the first week in October, an average crop will result.

It is too early to forecast the prospects for the olive oil season. Some oil will surely be available for exportation during the coming winter, but to what extent can not now be ascertained. The lack of sufficient rain during the past three years gradually reduced the olive crop of Andalusia to such an extent that prices for last season ruled so high that exportation was impossible.

TELEPHONE IMPROVEMENTS.**GOVERNMENT WILL ADOPT MODERN METHODS.**

The Madrid Government has appointed a commission to report on the adoption of various devices for improving the Spanish telephone and telegraph services, such as the establishment of a higher school of telegraphy, simplification of the telegraph regulations, development of the telephone system, purchase of modern material, and acceleration of the delivery of telegrams, more especially those intended for the newspapers. The commission is to report by October 1 in order that the necessary reforms may be begun as soon as possible.

GREECE.**TRADE TOPICS.****INDUSTRIAL AND COMMERCIAL MOVEMENTS.**

Consul George Horton forwards from Athens a number of Greek industrial notes, as follows:

The Athens tramway system has finally been authorized to be increased from 40 kilometers to 140 kilometers, or about 92½ miles, and it is esti-

mated that about 17,000,000 drachmas capital will be required (\$1 = 5.50 drachmas).

The British consul at Syra alleges that Greek statistics are unreliable, in proof of which he makes the following statement: "A significant instance this year is noticeable in the exports to America, given at a value of \$10,784, whereas certificates of origin for that country were issued by this consulate for goods amounting to \$96,415."

During the fiscal year 1906, 219,892,063 pounds of dried currants were exported from Greece. England, America, Holland, and Germany were the principal consumers, England taking 120,142,043 pounds, America 29,576,542 pounds, Holland 26,274,204 pounds, and Germany 26,409,809 pounds. The present year's crop is about 6,000,000 pounds lighter than that of last year.

A new law authorizes the Greek Government to make the necessary loans for prolonging the Piræus-Larissa Railway to the Ottoman frontier. In case the Greek line does not connect with the Turkish system within two years after the frontier has been reached, a branch line is to be constructed to the seashore, from which point to Salonica will be only three hours by steamship. It is thus hoped to effect railway communication between Greece and Europe.

TURKEY.

BANKING METHODS.

FOREIGN FINANCIERS COMPETING AT CONSTANTINOPLE.

Vice Consul-General William Smith-Lyte makes a report concerning banks and banking in Constantinople, writing:

Banks in this city do a general depositing and checking business, such as is in vogue in the United States. No charges are made for book-keeping or for checking such accounts of patrons beyond a charge for check book to cover the cost of Ottoman revenue stamps. Until quite recently no interest was allowed on balances of such accounts, an exception being made in the case of accounts of charitable institutions. Lately with the establishment of foreign banks in Constantinople, competition has become very keen and certain banks are allowing 3 per cent interest on balances of current accounts. On deposits for fixed periods of six and twelve months interest at the rate of 2 to 3 per cent is credited. Such deposits can not be withdrawn in the interim, the banks giving in return for the deposit a bill on themselves at six or twelve months date plus interest for the whole period. Banks negotiate sight bills of other banks and bankers and sight drafts and checks on other cities at the market rate of exchange for the day, giving immediate credit for the same. Banks discount paper for patrons and also buy from note brokers.

The State bank alone enjoys the privilege of issuing bank notes, but under the restriction of a balance in gold in proportion to the notes in circulation. Notes are for \$22 in value only and no multiples. Owing to the Turkish agreements with foreign countries banks are not taxed for State and municipal purposes and are under no obligation to publish balance sheets; hence it is difficult to estimate dividends or profits earned which, however, it is supposed are not less than 10 per cent on the share capital.

ASIA.

CHINA.

EMPIRE'S FOREIGN TRADE.

GREAT INCREASE IN IMPORTS FROM THE UNITED STATES.

Consul-General J. L. Rodgers, of Shanghai, furnishes the following report of the foreign trade of the Chinese Empire for the calendar year 1905. He declares that the boycott against American-made goods was a failure, as the imports from the United States were more than two and two-thirds times larger than in 1904, the increase in cotton fabrics being especially marked. He says:

The total value of China's foreign trade in 1905 was \$492,741,961 gold. The northern Yangtze and central ports, as far south as Wenchow, contributed 72 per cent of this, the southern ports 26.5 per cent, and the frontier ports 1.5 per cent. Shanghai's share of the whole trade was 53 per cent. The value of imports shows an increase of 30 per cent, while the exports decreased 5 per cent, as compared with those of 1904.

The imports and exports by principal countries are shown in the following statement:

Countries.	Imports.	Exports.	Countries.	Imports.	Exports.
Belgium.....	\$7,074,664	\$1,654,681	Italy.....	\$310,100	\$5,964,322
British India.....	25,402,590	1,985,994	Japan.....	44,760,131	25,889,213
France.....	2,782,492	13,776,730	Macao.....	2,133,034	3,521,296
Germany.....	10,827,635	3,925,684	Russia.....	1,479,714	5,485,445
Great Britain.....	63,124,810	13,186,917	Straits Settlements.....	2,984,594	2,776,311
Hongkong.....	108,091,975	59,460,429	United States ^a	56,149,291	19,732,464

^a Includes Hawaii.

The imports from the United States in 1905 were nearly two and two-thirds times larger than those of 1904, while the exports were slightly less, which demonstrates that the boycott could not and did not make any headway against such an avalanche of goods.

COTTON MANUFACTURES.

The importation of cotton manufactures increased enormously, the total value being \$132,450,646 gold. Of 27,724,980 pieces of plain fabrics, an amount more than double that of 1903 and 1904, and over 9,000,000 pieces more than in 1902, which was the greatest year pre-

viously, the supplies in pieces came from the principal producing countries, as follows:

Countries.	1903.	1904.	1905.
Great Britain.....	7,841,405	8,109,020	13,548,025
United States.....	4,782,141	3,708,548	12,566,093
Japan.....	730,723	607,312	780,580
India.....	53,806	183,461	650,636

The English importation of 1905 was about 49 per cent of the total, the American 45 per cent, the Japanese 3 per cent, and the Indian a little more than 2 per cent. All cotton manufactures, whether plain or fancy, have had increased imports, even though native mills have been busy and the output of yarn greater.

OTHER IMPORTS.

The import of metals has increased, the principal addition being through copper, which amounted in value to \$22,727,492. Sugar, food stuffs, and luxuries increased largely, the war accounting for much of the latter; flour importations remained practically unchanged, the total, including reexportations, being 131,789,733 pounds in 1905, against 125,259,600 in 1904. The imports of American flour at Canton and southern ports, through the boycott, decreased from 94,266,666 pounds to 88,270,000. Australian flour gained a market of small extent in the south, but the loss to American flour was offset by the great demands at Shanghai for reexportation to the seat of war and to take care of the natural market caused by the shutting down of the Manchurian mills.

Kerosene oil importation was 153,471,831 gallons, 3,419,404 less than in 1904, an abnormal year. Of this amount American oil contributed 52 per cent, an increase of 2 per cent over the preceding year; Russia furnished 8 per cent, a loss of 13 per cent; Sumatra, 32 per cent, a loss of 3 per cent, and Borneo, 8 per cent, nearly all gain. As an indication of a market which is sure to expand greatly, take the importation of railway materials, which increased from \$4,383,915 to \$5,263,119, and in addition there was a separate importation of \$365,000 worth of steel rails. In machinery there has also been a great increase, the amount rising from \$1,941,828 to \$3,895,957.

THE EXPORT TRADE.

The exports in 1905 amounted to \$166,348,384 gold, a decrease of \$8,466,895 from those of 1904. The decrease in the three staples—cotton, silk, and tea—was nearly \$18,250,000, due to crop failure. Tea fell from \$22,047,224 to \$18,575,326. Silk and its products, valued at \$51,387,500, or nearly one-third of all the exports, show a decrease of \$5,840,000. The exports of the year are nearly \$5,110,000 less than those of Japan, while in white raw silk, hand and filature, the export, compared with that of Japan, is 9,282,266 pounds for China and 9,655,866 pounds for Japan, a great loss for China. Raw cotton exports sank to 105,236,400 pounds, at a much lower price, the result being the combination of a bad crop and a restoration of normal values for the product.

UNSAVORY TRADE METHODS.

Mr. Rodgers deplotes the methods as practiced by a certain class of unscrupulous Americans who have been operating in China and imposing upon its people to the detriment of American trade. He says:

There are many things which can be given as current reasons for retarding American trade in the Orient. The advent of a class of Americans like those who came from Manila after a brief experience there, and those who tried their fortunes in connection with the events of the Russo-Japanese war, has done a great deal to injure the American name and reputation with the Chinese. This class, usually indigent, has, by reason of imposition upon the Chinese, destroyed to some extent a confidence which has existed for many years and which had borne good fruit. Inadequate laws, under the extraterritorial right, are largely responsible for such a condition, since the consular officer is rendered practically powerless in the most important cases—those calling for the return of fugitives from justice. However, this class in all the important treaty ports is being reduced to a minimum, owing to the restoration of peace and the growing impression that China is no longer regarded as a paradise for the fugitive from America, the camp follower, the adventurer from Manila, and the proverbial beach comber indigenous to this part of the world. Nevertheless there are good reasons for saying that every American firm which contemplates sending a representative to China should be very certain of his character, and other things being equal, should choose the quiet, orderly person rather than the reverse type, in spite of the current opinion that such are indicated for the Orient.

CUSTOMS STATISTICS.

THE GRAND AGGREGATE FOR 1905—GAIN IN IMPORTS OF OVER
\$80,000,000.

The Inspector-General of the Imperial Chinese customs has published a report on the foreign trade of the Empire for 1905, which enables an interesting comparison to be made of the commercial progress of the country.

The year 1904 closed with general anticipation of brilliant trade prospects for the coming twelve months, and, with a market depleted of stocks of cotton goods, orders were placed for supplies sufficient to meet the most sanguine expectation. It is doubtful, however, if the actual consumption by the people, except only in the north, has been much, if any, above the normal, and the excess of imports over the average of the last few years is probably much of it still in the hands of indenters and wholesale dealers. This is borne out by the known facts. With regard to the boycott of American goods, the general verdict is that not much injury has yet been caused to the American manufacturer and merchant. The final effect, however, can not yet be seen, and the verdict must await the close of another year, or even later. The only immediate visible consequence of the climatic conditions (serious floods and storms) of the year, the war,

and the boycott all combined, is that a larger proportion of imports than usual is left in first hands.

SECTIONAL TRADE CLASSIFICATION.

Summing up generally the state of business last year, the report says: "The north has shown great power and possibility of absorption of foreign goods, while the consumption in the Yangtze basin and the south has not increased, and that exports have generally shown no great development. It is also to be noted that the Yangtze basin provides exports sufficient in value to pay for the imports it consumes, and that both north and south have consumed more in value than they have produced; but during the past year the north has been fed by the war, while the south constantly supplies a considerable export of emigrant labor." The total value of the foreign trade last year as compared with 1904 was, in haikwan custom taels (tael, 80.1 cents), as follows:

	1905.	1904.	+ Increase or - decrease.
	<i>Hk. taels.</i>	<i>Hk. taels.</i>	<i>Hk. taels.</i>
Imports	447, 100, 791	344, 060, 608	+103, 040, 183
Exports	227, 888, 197	239, 486, 683	- 11, 598, 486
Total	674, 988, 988	583, 547, 291	+ 91, 441, 697

The increase is equal to a gain of 16 per cent. To the total the northern, Yangtze, and central ports, from Newchwang to Wenchow, contributed 72 per cent; the southern ports, from Santuao to Pakhoi, 26½ per cent, and the frontier ports 1½ per cent. The share of Shanghai alone, as a primary importing and ultimate exporting port, was 53 per cent of the whole trade of China, and 74 per cent of that of the district commercially subsidiary to it. The disproportion of imports to exports has gone on increasing; imports were greater than in 1904 by 30 per cent, and exports were less by 5 per cent, while imports exceeded exports by 43 per cent in 1904, and by no less than 97 per cent in 1905. A large portion of the trade of China (usually 40 per cent, each of imports and exports) passes through Hongkong, although but little comparatively can be consumed or produced in that port; this fact throws much obscurity over the figures of the annual value of the direct trade with each country.

VALUE OF COTTON GOODS IMPORTS.

Of the total value of imports, the northern, Yangtze, and central ports contributed 76 per cent, the southern ports 22½ per cent, and the frontier ports 1½ per cent. The increase was provided, roughly, a half by cotton manufactures, a fourth by metals, and a fourth by sundries. Cotton manufactures rose to the abnormal value of 181,453,000 haikwan taels, which was 31½ per cent more than in 1904, on the inflated valuation of that year, and 30 per cent more than the highest previously recorded import, that of 1902, when cotton values were more normal. To the import of 1905 the English mills contributed 49 per cent, the American 45 per cent, the Japanese 3 per cent,

and the Indian a little over 2 per cent. The import of metals was more than doubled in value. Brass, lead, tin, and quicksilver were less in quantity and value, the reduced import of lead being attributable to the reduced export of tea and to some extent to the increased price in western markets. Iron and steel were considerably increased in nearly every kind. Of the total value of all metals, 45,429,000 haikwan taels, copper contributed over two-thirds.

Of the total value of exports, the northern, Yangtze, and central ports contributed 63 per cent, the southern ports 35 per cent, and the frontier ports 2 per cent. . The three categories of raw cotton, silk, and tea were reduced in value by 25,000,000 taels, the reduction being attributable to bad crops of the main staples and adverse exchange, marked by unexpected rises to which trade had not time to adapt itself. Tea accounts for much of the reduced value of exports, the value of shipments in 1904 being 30,202,000 haikwan taels, and in 1905, 25,446,000 haikwan taels, the reduction being occasioned both by diminished quantities and lower prices. Silk and its products contributed to the total export trade of the year a sum of 70,394,000 haikwan taels, being 31 per cent of all exports. This sum was nearly 8,000,000 taels less than in 1904, and silk and tea together account for the whole of the reduction in the value of the export trade. The trade of the treaty ports was as follows:

	Net foreign imports.	Exports of native produce.
	<i>Hk. taels.</i>	<i>Hk. taels.</i>
1905	458,340,485	362,688,974
1904	348,603,090	371,522,872

In addition to the net foreign imports shown above, the value of the net native imports for all the treaty ports in 1905 was 166,884,000 haikwan taels, as compared with 163,073,000 haikwan taels in 1904. The values of the exports of native produce given in the foregoing table include those sent abroad and those sent to other Chinese ports. In the returns under review these figures are not distinguished separately for each port, but the values of the total exports from all ports is stated to have been made up in 1904 and 1905 as follows:

	1904.	1905.
	<i>Hk. taels.</i>	<i>Hk. taels.</i>
Value of exports abroad	239,486,683	227,888,197
Value of exports home trade.....	132,036,189	134,800,777
Total.....	371,522,872	362,688,974

UNITED STATES MAKES GOOD SHOWING.

The following table shows the value of the imports (not deducting reexports to foreign countries) into and the exports from all the treaty ports from and to the principal foreign countries in the years 1904 and 1905:

From and to—	1904.		1905.	
	Imports (including reexports).	Exports.	Imports (including reexports).	Exports.
	<i>Hk. taels.</i>	<i>Hk. taels.</i>	<i>Hk. taels.</i>	<i>Hk. taels.</i>
United States.....	29,180,946	27,087,975	76,916,838	27,030,772
United Kingdom.....	57,220,955	15,269,963	86,472,343	18,064,270
Hongkong	141,085,010	86,858,017	148,071,198	81,452,643
India.....	32,219,712	2,886,781	34,798,437	2,720,540
Singapore and Straits Settlements.....	4,061,919	3,667,151	4,061,088	3,803,481
Australia, New Zealand, etc.....	494,856	218,290	1,538,747	71,928
South Africa and Mauritius	2,243	98,279	13,523	55,252
Canada	2,162,174	531,561	2,387,658	406,391
British Empire.....	237,246,869	109,030,042	277,342,994	106,574,505
Japan	50,164,056	87,986,858	61,315,248	35,464,963
Europe (except Russia).....	23,512,933	44,512,544	31,595,674	36,013,088
Russian Empire.....	4,467,476	5,056,362	2,017,012	9,432,117
Macao	2,894,593	5,058,741	2,921,923	4,823,693
French Indo-China	1,754,750	2,953,718	1,653,572	2,324,692
Korea	879,320	1,390,695	1,753,701	2,185,927
Other countries.....	7,343,720	6,409,748	5,677,570	4,038,440
Total.....	857,444,663	239,482,683	461,194,532	227,888,197

It should be noted that the imports from Hongkong come originally from, and the exports to that colony are further carried on to, the United Kingdom, America, Australia, India, Straits Settlements, and the coast ports of China.

STRONG BRITISH LEAD.

The following table shows the predominant share which the United Kingdom holds in the total volume of the trade and shipping at the treaty ports and in the dues and duties paid at those ports as compared with other nations in 1905:

	Tonnage em- ployed.	Share of foreign trade.	Share of coasting trade.	Duties paid on cargoes (foreign coasting trade).	Tonnage dues paid.
	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>
British	48.2	56.5	46.5	54.8	51.7
German	11.3	12.6	7.9	11.4	16.5
Japanese	8.6	1.9	5.8	3.3	4.1
All other foreign nations.....	9.3	17.9	4.4	12.2	22.1
Total	77.4	88.9	64.6	81.2	94.4
Chinese	22.6	11.1	35.4	18.8	5.6
Total	100	100	100	1000	100

The number of all foreign vessels entering the treaty ports last year was 75,200, of 56,348,000 tons, as against 77,000 vessels of 49,000,000 tons in 1904. To these figures must be added those of Chinese shipping, representing a further 16,400,000 tons in 1905 and 14,767,000 tons in 1904.

COMMERCE AT CANTON.

CENTER OF AMERICAN BOYCOTT—EFFECT ON TRADE.

In a review of trade operations in 1905 for the Canton consular district Consul-General Julius G. Lay says that the imperial customs

show a slight increase of foreign imports, while there was a pronounced decrease in foreign exports. Mr. Lay continues:

The boycott of American goods as a protest against the alleged unjust treatment of Chinese in the United States was started here in July of 1905, and though the movement was denounced from the throne and forbidden by imperial edict and vice-regal proclamations, it has taken firm hold of this province, and nowhere have the effects been more pronounced than in and around Canton. Other local questions of vast importance are for the time being engaging fully the attention of the gentry and merchants, so that for the present at least the agitation is in a quiescent state. The San Francisco calamity, too, has had a salutary effect in cutting off for a while, and possibly forever, the regular money remittances (some of which were large) that were formerly sent here by the San Francisco Chinese in support of the boycott movement. Also the Chinese dealers in American goods have lost heavily as a result of the agitation and do not hesitate to say that they are weary of it. However, I am of the opinion that the end is not yet in sight, and feel assured that the Cantonese, who contribute 95 per cent of the Chinese en route to America, will not be friendly disposed toward us and be willing purchasers of our goods as long as the exclusion laws remain in force. Any broad and general deductions as to the figures of imports and exports have nothing to do with the question of national feeling. The import tables in the custom's returns do not indicate any serious decline of American products, and are therefore somewhat misleading; for it must be understood that though shipments to Canton of American goods do not fall far behind the quantities of previous years, unusually large stocks—especially of kerosene oil—are on hand.

OIL AND FLOUR.

The effect of the boycott will probably be far more evident in the returns for the current year. The staple American imports into South China are kerosene and flour, and to a minor degree, cotton goods. Since July 1, 1905, the local Standard Oil Company reports that its importations of oil were reduced over 50 per cent, or about 125,000 cases, for Canton alone. The total importation for all South China suffered a loss conservatively estimated at 500,000 cases, valued at \$350,000 gold. This company is by far the most serious individual sufferer as a result of the boycott, the local organization's efforts being especially directed against that company.

The American flour interests have never been as serious losers as reports current on the Pacific coast of America would indicate. This fact is proven by statistics furnished by the American flour concerns here. The importation of flour into Hongkong for redistribution to Canton, Wuchow, and other West River ports for the last six months of 1904 was about 750,000 barrels, while the importation for the corresponding period of 1905 aggregated 550,000 barrels, thus showing a decrease of about 200,000 barrels, valued at approximately \$800,000 gold.

EFFECT ON COTTONS—TEXTILES IN DEMAND.

Cotton cloths have almost held their own, 240,000 yards being imported from July to December, inclusive, during 1904, while 180,000

yards were imported for the corresponding period, 1905. These figures show a total loss, by reason of the boycott, for South China of over \$1,250,000 gold. In comparing this amount with our total import trade with China, about \$63,000,000 gold for the fiscal year ended June 30, 1905, it would seem that the losses do not assume the high percentages their first appearance would indicate.

In cotton goods the most noticeable increases are in lastings, plain; flannel, striped; velvets, and Japanese towels. In gray shirtings there was a shortage of nearly 50,000 pieces, only partly compensated by increased importations of white shirtings and Hankow mill gray shirtings. In T cloths, 36 inches, goods have been proportionally dearer than 32 inches throughout the year, so we notice a great shrinkage in the wider cloth, though the combined importation is only slightly behind last year. Mixtures have advanced some 50 per cent in value, while among woollens, lastings and Spanish stripes show the greatest advances. Canton being within the Tropics, there is a very small demand for woollens. The demand for silk damasks (mixtures brocaded) is steadily increasing.

OTHER IMPORTS—USE OF MODERN ARTICLES.

There was a very large importation of copper ingots for the mint, which was overstocked, and considerable quantities were reexported toward the end of the year. Foreign raw cotton recovered considerably at the expense of the native article. In food stuffs there was a marked increase in salt fish and a heavy decline in rice. Flour maintained its position in spite of the boycott. The increasing popularity of certain articles of foreign clothing is shown under the headings of caps and hats, singlets, etc., and shoes and boots. Foreign style peaked caps and uniforms, through the influence of the Japanese, are now largely worn, especially by the military and students, and, in addition to those imported, considerable numbers are manufactured locally. Rubber shoes are also much worn. The Chinese rain boot has been to a considerable extent displaced by similarly shaped boots of rubber, and low shoes are also often seen, being apparently very well adapted to the stone-paved streets of Canton. These rubber goods are almost exclusively supplied by Germany.

The changing over of the army to a foreign basis has created a demand for khaki drill. Condensed milk, most of which is of American origin, gains in popularity, and a taste for margarine appears to be growing. The feature of the oil statistics covering, however, the whole year is the increase of nearly a million gallons in American oil.

PAPER AND RAILWAY SUPPLIES.

The oversupply of paper, especially printing paper, accounts for the large decrease in importation this year. The trade, however, shows signs of improving, notwithstanding the fact that heavy machinery from Germany, to be used in the manufacture of paper, has recently arrived in this port. Extensive factories will be established by Chinese merchants and capitalists in Fatsan, a large and enterprising city situated about 12 miles southwest of Canton on the line of the Canton-Sam Shui Railway.

Railway materials represent but a small value this year in consequence of the difficulties that have arisen over the Hankow line. The

value of machinery was about the same as last year, or \$95,000 gold. Under this heading considerable developments may be looked for in future years. It must be noted, however, that heavy machinery to the value of over \$150,000 gold was imported during the last year by native junks from Hongkong and therefore dealt with by the native customs. From the piece-goods dealers' point of view the year has been far from satisfactory, though sundries have come out fairly well. Keen competition has, however, cut commissions very fine, and profits are no longer what they were.

DECLINE IN EXPORTS.

There was a decrease of over \$1,500,000 gold in the value of the foreign export trade of this port, principally on goods intended for European and American markets. An advance may be noticed under the heading of bristles, chinaware, firecrackers, and brown sugar, the last-named item having recovered after two bad years. Cassia decreased slightly. Palm-leaf fans, the quality of which has deteriorated to such an extent that orders from abroad have dwindled enormously, show a further decrease of over 9,500,000 pieces. It rests with the producers to recover the trade by bringing the quality of fans at least to the old standard. Matting shows a decrease of some 14,000 rolls. This is attributed to the poor quality of the 1903 and 1904 shipments, which led to considerable stocks on foreign markets being carried over to 1905. There was a considerable improvement in quality in last year's cargo, but the straw growers are reported to have neglected their fields during the year, which has resulted in a short supply of straw and a consequent rise in prices which is likely to seriously affect this year's business.

TEA AND CIGARETTES.

Tea calls for remark only by reason of the former importance of the trade. The once flourishing tea trade between Canton and America and Canton and London is now practically extinct. During the year not one pound was sent to America, and shipments to other countries only amounted to some 600,000 pounds, which is about one-tenth of the export figures for 1895, and these again only half of the export of ten years earlier. The exports to London of 11,700,000 pounds in 1885 dwindled to half that quantity in 1895, and to 600,000 pounds in 1905. I am informed that the main cause of this marked decline is the steadily increasing demand for the leaf made in the form of pouchong for native consumption, i. e., green tea. In this form growers can obtain far more remunerative prices for their holdings than for the leaf prepared to meet the London market. An interesting item among exports to Hongkong is native-made cigarettes, the manufacture of which received an impetus owing to the refusal of boycotters to purchase American cigarettes. Even cigars are now made locally, and are preferred in certain circles to Manila products.

CUSTOMS DUTIES COLLECTED.

The revenue of this port for the year 1905 exceeded \$2,220,000 gold, which is some \$36,000 ahead of the figures for 1904. The increase was due to imports and opium, export and coast trade duties having

declined. The net value of foreign imports was \$19,000,000 gold, an advance of more than \$180,000 over the 1904 figures, and this in spite of the unusually high rate of exchange ruling for a considerable part of the year, which of course reduced the silver value of all imports. The general improvement was therefore actually greater than the small increase in value indicates. The total value of piece goods and metals compared favorably with 1904, but sundries fell off.

SILK TRADE AT CANTON.

SMALLER COCOON PRODUCTION, YET PRICES RULED LOWER.

Mr. Lay states that the raw-silk trade has not been satisfactory.

The total export compares as follows: To Europe, 32,168 bales for 1905, against 33,301 for 1904; to United States, 8,769 bales, against 11,113. Each bale weighs 106½ pounds. The decrease of about 7½ per cent is attributed to a cessation in business with the United States during the months of September and October, 1905, when that market withdrew from buying raw silk, stocks of manufactured goods having accumulated. There was a depression in trade, and it only required the United States to recommence buying to put backbone again into the position. Happily the change came after the turn of November, business became brisk, and continued so up to the end of the year.

Business on the whole has not been unremunerative, but profits have only been small and not sufficient to enable the Chinese to recoup themselves for the two previous disastrous years. Prospects, however, remain promising, and with a continued active demand, both from Europe and America, the season of 1905-6 should end satisfactorily. The stock carried over from 1904 was some 12,000 bales. An abnormally wet spring practically ruined the first two crops, which yielded, respectively, 2,000 to 9,000 bales. The third crop was 7,000 bales, the fourth only about 4,000 bales, while the fifth crop yielded 10,000 and the sixth 8,000 bales. Owing, however, to the high exchange, business during the autumn was dull.

SILK GROWERS DO NOT MANAGE WELL.

It is said that, generally speaking, the year 1905 was an unfortunate one for producers, who paid too much for cocoons and were, owing principally to the high exchange, unable to obtain the dollar prices which would give them a profit on their raw silk. Exchange conditions upset not only the calculations of producers, but of European and American buyers, who have to complain of losses during the latter half of the year. Some 14,000 bales were carried forward into 1906. The total yield of cocoons for 1905 is estimated at about 5 per cent less than the last season, which was rather below the average. No change occurs in quality of produce, the natives persisting in continuing their antiquated methods. Many filatures have ceased to exist, there being no inducement to invest capital in them, the Chinese finding it more profitable to put their money into other investments. With "cantons" undoubtedly in favor, the opposite should be the case, but the Chinese use no discretion when buying cocoons and generally pay far too much, so that when the silk is reeled the cost is too high in proportion to "Japans" and "Italians," and in order to compete lower prices have to

be accepted, which in many cases show losses to the filatures. Advice from foreigners is utterly ignored in this as in other respects, and it is only hard experience and heavy losses which will teach the Chinese to use more discretion. When this is learned, production is sure to increase and business become more remunerative. The continued unsatisfactory monetary arrangements in China are also an impediment to the silk trade as well as to all other branches of trade, and will probably remain so until the dollar is placed on a fixed basis.

EXPORT OF WASTE SILK.

The total export in 1905 of waste silk, exclusive of pierced cocoons, shows an increase on the previous year as follows: To Europe, 28,530 piculs (picul=133½ pounds), against 25,078 in 1904; to America, 2,934 piculs, against 2,255 in 1904. Thus the export of waste silk shows an increase of some 5,000 piculs over last year, and yet the trade was generally unsatisfactory. Native dealers lost money, chiefly owing to speculation, while keen competition amongst exporters left them but little profit. The season opened dull, with steam waste at \$102 per picul; but some heavy contracts for forward delivery just before the Chinese New Year made the market firmer, and during February to April, 1905, prices ruled from \$106 to \$109. In May prices began to decline in anticipation of large second and third crops, and the lowest point of the year was touched in June, when sales were made at \$96. In July speculation on the part of producers forced prices up to \$108, and increased demands in September still further until \$120 was reached, after which rates gradually declined again to \$102. The most satisfactory feature of the trade was the fact that complaints and claims on account of inferior quality of shipments were few, showing that dealers had taken greater care than usual to keep shipments up to the standard.

IMPROVED CHANNELS, NEW WHARVES, AND CITY PROGRESS.

Consul-General Lay describes in the following letter the progress in providing better shipping facilities and other innovations in that South China metropolis of 1,000,000 people:

The work of improving the channels through the barriers in the Canton River, commenced in October, 1904, was completed by September, 1905. Considerable progress has been made with the bunding and reclamation works on the Fati shore (Back Reach). The Standard Oil Company's installation is now in working order. The value of property invested by the Standard Oil Company in Canton alone aggregates over \$1,250,000 gold. The Hamburg-American line's reclamation is well advanced. Before long there will be a number of steamer wharves in the Back Reach.

The work in connection with the Bund along the north bank of the Front Reach has progressed in a very unsatisfactory manner. Three hundred feet of wall have already collapsed, and some 1,500 feet more show signs of following at an early date. Therefore, an undertaking which should have been a great public benefit, providing improved means of communication along the busy river front, besides affording increased facilities for landing and shipping passengers and cargo for

the numerous up-country boats now seems likely to prove a very serious injury to the harbor.

The health of the port is good, generally speaking. There were no epidemics, and though a few cases of plague occurred, the ravages of this disease have been steadily decreasing during the past few years.

CEMENT WORKS—COINAGE—RAILWAYS.

Plans are being perfected for the building of large cement works in Canton by the provincial authorities, the cement to be used in the construction of various public works now being projected. The preliminary surveys for the new water system in Canton are completed and all plans submitted to the Chinese board in charge of that branch of the public service. The English engineers engaged in this work for the past six months have been recently discharged. No further definite action is being taken for the present in the matter. Among useful reforms which have been recently introduced into Canton one of the most efficient is the new police system. The furtherance of educational matters and an attempt at sanitation are also marked features among recent innovations.

The standard coin of Canton is now the 20-cent piece, even fairly large payments being made in this coin or in Government bank notes. These latter, of the values of \$1, \$5, and \$10, are only exchangeable for subsidiary coins. There is a considerable discount on them in relation to Hongkong bank notes, amounting sometimes to as much as 5½ per cent. The issue of these notes is a convenience to native bankers, who now avoid the difficulties they formerly had with the mint when purchasing coins, as the notes are readily accepted against the small coins required. The existence of the debased currency, however, is bad for general business. Silver dollars are exceedingly difficult to obtain, and sycee is also scarce.

The newspapers publish telegrams from Peking reporting that the agreement between the Chinese and British Governments has been signed providing for the immediate construction of the Kowloon (Hongkong) Canton Railway. The completion of this road is intended by the Hongkong Government, which loaned \$10,000,000 gold to China to repurchase the American Canton-Hankow concession, to tap the rich country lying within the provinces of Kwang Tung, Hunan, and Hupeh, through which the valuable railway which Americans relinquished will eventually run.

The object of the Hongkong Government is to secure the transshipment and handling of goods destined for foreign countries from the interior between Hankow and Canton, and to prevent as far as possible Whampoa becoming the southern terminus of the Canton-Hankow line. Whether this be the main purpose or not in constructing this short line between Kowloon and Canton, this railway, like all others in China, will pay handsome profits from passenger traffic alone. It is doubtful, however, whether Canton or Hongkong will benefit as much as is generally predicted by the Canton-Hankow railway when it is built. I am of the opinion that with the increased wharfage facilities at Hankow the greater part of the freight carried by this road will go to Hankow instead of to Hongkong, but, nevertheless, it is a valuable concession for the passenger traffic and coal it will handle.

COMBATING OPIUM.

GOVERNMENT SEEKS TO CURTAIL THE EVIL—TAX REVISION.

China has just revised and consolidated her native opium taxation. It amounts to 115 Peking taels per picul (about 66 cents per pound) on crude opium and double that amount on the prepared article. the grower's tax being abolished.

According to reports from Peking the Government is anxious to curtail the use of opium, but is dependent for revenue to the extent of over \$4,000,000 a year on the duties paid on imported opium. She can not, in the present state of her national finances, witness without concern the disappearance of such an important branch of revenue. The imports of opium amount to 3,000 tons, while the native article is produced to the extent of 30,000 tons. Moreover, there is a great development in the use of morphia. The Japanese ship to China large quantities of cheap hypodermic syringes.

The better Chinese are reported to have a strong feeling against the enormous extension of the growth of the poppy throughout the Empire. A Peking correspondent of the London Times indicates that China will ask India to consent to an annual reduction in the import of opium to China, which would have the effect of extinguishing the trade in ten years, and as an evidence of good faith will issue an imperial edict condemning the use of opium and forbidding the employment in the Government service of any opium eater, and order an annual reduction in poppy cultivation leading to its extinction in ten years.

COMMERCE IN WESTERN CHINA.

AGENTS NEEDED FOR THE GREAT INTERIOR REGION.

Consul Mason Mitchell, writing from Chungking, says that from there to the Tibetan border exists a population of 150,000,000 Chinese people, including large cities with 200,000 and more. He continues:

If it is necessary in America to send on the road trained men to introduce and sell our own goods, it is more necessary to send to this vast market in western China to show the people lines of goods at present unknown to them, and the agent will find the Chinaman as quick to appreciate and eager to possess a good thing as any white man. Until American firms see fit to send white agents into these districts, little hope exists of creating business. I note the fact that there is no American firm or white agent west of Ichang. In Chungking there are four European firms keeping a general line of French and English goods. There are also four large European houses represented, two British and two German, who command a good export and import trade for their countries, but no American firm is represented here.

SHANGHAI TRADE LAST YEAR.

THE UNITED STATES SECURED NEARLY ONE-FOURTH.

The enormous importance played in China by Shanghai as a distributing center for imports is exemplified in British statistics on the trade of the city during 1905. The total commerce amounted to \$268,145,233 as against \$226,598,839 in 1904. Of the aggregate

\$79,027,093 represents exports and \$189,126,790 imports. The gross volume of trade, including local business, was \$325,057,867 as compared with \$282,295,932 in 1904. Of the foreign commerce the British Empire accounts for 46 per cent, the United States coming second with 23 per cent, Japan third with 13 per cent, France fourth with 6 per cent, and Germany fifth with 4 per cent; that is to say, together these five nations absorb 92 per cent of the aggregate.

NEW TREATY PORT.

CHINESE OPEN CHANG-TEH-FU TO TRADE.

Consul-General William Martin reports from Hankow that certain territory outside of the city of Chang-teh-fu, Hunan, was officially ordered to be opened to foreign commerce on July 2, 1906. The city is located on the Yuan River where it flows into the Tung-ting Lake, which again flows into the great Yangste River at Yochow. As Chang-teh-fu has not been opened to trade by treaty, but by the Chinese themselves, they have formulated the conditions on which foreigners can live and trade there and embodied them in certain regulations, which are on file for inspection at the Bureau of Manufactures.

MANCHURIA.

CUSTOMS-HOUSE AND TRANSPORTATION QUESTIONS.

It is reported from Peking that conditions in Manchuria are not yet normal, nor can they be till April 15 next year, when the military administration will have relinquished to the Chinese civil authority everything except the railway. It is being urged on many sides that China establish a customs-house at Dalny with the same concessions to Japan that the Germans have at Kiaochau, which are that 20 per cent of the net import duties collected are surrendered to the foreign government leaseholder for colonial purposes.

The Chinese Eastern Railway has been completed by the Japanese from Port Arthur to Szu-ping-tai, a distance of 395 miles, and will soon be complete to Kun-chu-ling, 34 miles farther, from which point to Kwan-cheng-tsze, 40 miles farther, Russian trains are now running.

The British commercial agent in Russia states that the Chinese Eastern (Manchurian) Railway has reestablished its responsibility for the delivery of goods in transit from the station of Manchuri (Western Manchurian-Russian frontier), and that of Progranitchnaia (Eastern Manchurian-Russian frontier near Vladivostok) and back.

REGULATIONS GOVERNING FOREIGNERS.

Consul-General Thomas Sammons, of Newchwang, furnishes a copy of the official regulations governing the passage of foreigners through Japanese and Russian "spheres" in Manchuria, which was transmitted to the Department of State under date of July 16. The regulations were issued from the office of the Japanese military administrator, by whom they are signed, and read as follows:

Instruction has been received from the Kwangtung governor-general headquarters concerning foreigners requesting passage through Japanese and Russian spheres, to the effect that an arrangement has

been settled between the above-mentioned headquarters and the Russian Far East army headquarters, which states as follows:

(1) One of the both authorities has to ask for the sanction of the other, by stating name, nationality, rank, occupation, route and destination, object of journey.

(2) Upon the agreement of the both authorities, a passport issued written in the Japanese and the French from Japanese side, and written in the Russian and the French from Russian side.

SIBERIA.

VLADIVOSTOK ENTERPRISE.

CONSTRUCTION OF NUMEROUS PUBLIC WORKS PROPOSED.

Commercial Agent Roger S. Greene, writing from Vladivostok July 9, describes at length plans that are contemplated by the municipality for the construction of a series of public works which will require an expenditure of at least \$5,000,000 or \$6,000,000 United States currency. The authorities have in mind the creation of a loan for the granting of concessions to carry out the enterprise. Some features of the general proposition may be inviting to American enterprise and capital. Mr. Greene forwards a map of the city, with explanations, which may be examined at the Bureau of Manufactures, or it will be loaned to interested parties in the order of application. The report follows:

The most urgent of these are: (1) Waterworks, (2) sewerage system, (3) an electric street railway and an electric lighting system, (4) building of wharves and warehouses on the Golden Horn Bay, (5) the construction of a small harbor for coasting vessels on the Amur Bay near the market, (6) the building of markets, (7) the paving of the streets.

The city also wishes to erect a large building or series of buildings on the ground now occupied by the city garden, the basements to be used for storage of merchandise, the rear being right on the wharves, and the other floors for offices, parts to be set aside for an exchange or chamber of commerce, for municipal offices, for the municipal bank and library, and for a theater and club.

The erection of buildings for cheap lodgings is also planned. Rents are now so high that an unfurnished apartment of five rooms, for instance, even at some distance from the business center, can not be secured for less than \$100 a month. A steam bakery, steam laundry, a public bath house, a slaughterhouse, and small electric ferries on the bay are among the improvements proposed. More hospitals, schools and gardens, boulevards, places for sea bathing, etc., are desired. An addition of \$250,000 is needed for the capital stock of the municipal bank and for a Mont de Piété or municipal pawn shop.

METHODS FOR PAYMENT.

The city has no funds available for beginning by itself even part of this somewhat ambitious programme, but it is felt that these under-

takings, if properly managed, should most of them be profitable investments. The municipality is desirous of securing a loan for the purpose of undertaking the construction and management itself, but it is pretty generally realized that there may be difficulty in getting the money in this way, and therefore it is also open to propositions for (1) a loan secured on the work undertaken, the construction to be by the lenders or otherwise under their control; or (2) a regular concession for construction and operation, the franchise to last preferably not longer than twenty years. No definite outline of the conditions prescribed has been formed, and a proposition that required harder conditions in certain ways would have a chance of acceptance on account of other favorable points, such, for example, as exceptional solidity and standing of the applicants and guaranties for prompt and satisfactory execution of contracts.

The city has no funded debt at present, but owes to the central government some \$150,000 for provisions supplied in anticipation of a siege during the war, and about \$100,000 short-time loans have been recently negotiated for a hospital and a school building. On the other hand, it owns all the vacant land on the peninsula on which Vladivostok is situated, for a distance of some 13 miles, and still holds a great deal of valuable land in the city itself, which could be used as security indirectly, though a foreign corporation or person could not hold it itself. It also owns warehouses which bring in a good income. Lenders could not count on securing any interest or sinking-fund payments from the present revenues of the city, but would have to base their calculations on securing the return from the works constructed. The revenues and expenditures of the city ordinarily balance exactly. This year it is estimated that they will each come to about \$300,000. A loan or concession would require the approval of the central government.

Vladivostok has a population, civil and military, of probably about 100,000, it being impossible to state the number accurately on account of the policy of secrecy maintained regarding military matters. The city is built on the shores of the Golden Horn Bay and on the hills, which here begin to rise almost from the water's edge. To avoid ascending the hills too far, the city has extended itself along the shore, and is thus stretched out to a length of about 7 miles, disproportionate to its area; but there are a good many houses as high as 150 feet above the sea, the streets leading to them being very steep.

WATERWORKS AND STREET RAILWAY.

The waterworks proposal presents some serious difficulties, as in order to secure a sufficient supply of water it will probably be necessary to go out about 35 miles to the river Maïke, and I am told that two or three pumping stations would be required to get the water over some of the intervening hills. It has also been suggested that the pipes be carried under the Amur Bay to the river Mangugai, but the distance would be about the same and would include not less than 6 miles of pipe under the bay, which has an average depth of 42 feet and is in some places as deep as 48 feet. It is estimated that from 550,000 to 800,000 gallons of water will be required daily. The severe winter, during which the ground freezes to a depth of about 5 feet, is an important factor to be considered. The naval station and the railway have waterworks of their own.

The street railway and electric lighting propositions are the most attractive at present. The great amount of traffic on the one or two principal streets would make it possible for a railway to serve a very large number of people with a comparatively short and simple system, the present idea being to construct a line from the eastern end of the town, along the main street to the railroad station and to the market. One branch line northward into the country on the Aleutskaya or Kitaiskaya streets to First River, about 3 miles, would probably be also popular, as it would permit people to live in the suburbs of the town. A number of houses have been built in that direction already. There would probably be a good chance for a line around the bay as well. First and second class cars would probably be necessary here. Altogether about 8 miles of line should be constructed. The streets are for the most part wide enough to accommodate a double track.

As regards lighting, there are already a number of private plants, most of which supply other houses in their vicinity. This would be an important matter to be considered if concession were applied for. The city at present states that it will want for street lighting to begin with about 200 lights of 1,000 and 500 candlepower, and it is estimated that the private consumption will be from 5,000 to 7,000 lights of average candlepower. An increase would of course depend on the price and on the arrangements that could be made for limiting the private plants.

WHARVES, WAREHOUSES, AND MARKETS.

The wharves in the Golden Horn Bay should have a frontage of about 3,500 feet. The warehouses are to be of two classes: Those for safe-keeping of goods for long periods, which should accommodate 129,000 tons; and those to shelter transit cargo, which should have a capacity of 261,300 tons—some to be built of brick, and some of steel and galvanized iron, or other cheap fireproof construction, according to the goods to be stored.

On the Amur Bay simply a strong embankment will be necessary for about 1,750 feet and a short breakwater about 100 feet long in comparatively shallow water; this is for the use of the small sailing craft in the local and coastwise trade.

A very large market will be required. Near the present building temporary booths covering 2 or 3 acres have been set up.

The main streets in immediate need of paving have an area of 490,000 square feet.

CAPITAL AND EXPERIENCE REQUIRED.

Judging from present appearances it would seem that if this enterprise were taken up with proper caution and tact by parties of whose bona fides there could be no doubt, and who could command the necessary capital or credit, a concession might be obtained for all or part of these works. If persons desired to make a loan to the city for the purpose, advantageous terms could probably be obtained, as the rate of interest commonly prevailing here is very high. The whole sum of \$6,000,000 would not of course be needed at once, but would be spread over several years. I understand that several proposals have already been made to the city, but on account of the lack of standing of the promoters, or because the conditions they propose are not satis-

factory, they have not been accepted. It is most essential that parties applying for the concession should have large capital and experience to command the confidence of the municipality and of the central Government.

FUTURE OF THE CITY

Of course such an investment would require confidence in the future of the city, on which subject interested parties must investigate and form their own opinions. My own feeling is that Vladivostok is likely to continue to be at least as important as now and that these works could be made to pay on the present basis. This leaves out of consideration the tremendous growth possible with the rich country back of this port. As has often been pointed out, while Vladivostok is not an "ice-free" port, by the use of an ice breaker ships are regularly enabled to enter and leave the harbor during the months of January and February when the ice forms, and as the railroad service develops a large transit trade will undoubtedly grow up here.

From the point of view of the general interests of American trade, it would be a tremendous advantage if such a foothold could be obtained in Siberia. These works would require a very large amount of imported material, and being a practical demonstration the start thus obtained would be very valuable. As Vladivostok is within twenty days easy steaming from our Pacific coast, the United States ought to be in an exceptionally good position to compete strongly for this business.

Persons interested in this matter should communicate with the mayor of the city of Vladivostok, and, if possible, should send out a competent engineer who could make on the ground definite proposals for submission to the city. They must bear in mind that many difficulties will arise and that a satisfactory result can not be obtained without much patience, careful planning, and allowance for local conditions. The disadvantages may appear too great for some, but I believe the various projects to be well worth an investigation.

JAPAN.

SOUTHWESTERN TRAFFIC.

INCREASED COMMERCE AT NAGASAKI, MOJI, AND OTHER PORTS.

Consul Charles B. Harris sends from Nagasaki a report on the trade of that Japanese region for 1905, in which he says: •

The total trade of the consular district of Nagasaki last year shows a total increase of \$4,376,587 over that of 1904, it being \$33,785,076 in 1905, while it was \$29,408,489 in 1904. The total imports in 1905 were \$19,258,775, being an increase of \$2,663,716, while the exports increased by \$1,712,871 to \$14,526.30.

The imports into the port of Nagasaki during 1905 were \$9,775,643, a decrease of \$652,566, due largely to the lessened coal purchases after the cessation of the war. As Nagasaki is a central point for transshipment to ports in north China, Korea, and to Vladivostok, a comparison of figures in this respect is a valuable indication of trade

conditions. It is found that the value of commodities transshipped in 1905 was \$1,875,900, an increase of \$336,756 over the 1904 figures. The hope of the local interests of Nagasaki is that it may be made a free port. It is expected that the importance of Nagasaki will be greatly increased as a transshipping point when the Panama Canal is finished, and that in the interval, by providing a place where goods may be stored in transit, the prosperity of the port may be increased.

AMERICA RANKS THIRD IN SALES.

The five most important imports into Nagasaki during 1905 were coal, valued at \$2,708,305; kerosene, at \$1,275,342; iron and steel, \$796,833; rice, \$664,379, and oil cakes, \$549,116. Rice and oil cakes represent inter-Asiatic trade, a commerce which is bound to steadily increase, while in the other items there is a chance for American trade to keep the foothold it has and to make it more secure by reason of the possession of natural resources and by persistent endeavor. Imports from Great Britain led in 1905, the amount being \$5,394,409, China coming second with \$1,339,649, and United States third with \$1,026,011. The principal purchases from America were 6,531,470 gallons of oil, valued at \$659,716; 2,194,155 pounds wheat flour, at \$45,172; 1,860,012 pounds nails, at \$40,824; 29,216 dozen condensed milk, at \$37,870; wheat, \$25,849; steam boilers, \$24,386; timber, \$20,799; sole leather, \$17,690; cordage, \$17,124; locomotive engines, \$15,153; electric-light wire, \$12,622; lubricating oil, \$10,116.

The total exports from Nagasaki amounted to \$2,152,975. The largest amount went to China, that country taking \$945,469, Hong-kong taking \$526,276, and Korea \$270,702. Exports to the United States were of only \$2,523 value, while to the Philippine Islands \$32,908 worth went, or nearly double the Philippine trade of 1904, there being a considerable export of fresh vegetables.

OTHER PORTS—MACHINERY TO BE BOUGHT.

The foreign trade of Moji showed a large increase, the imports in 1905 being \$8,289,721, against \$5,077,133 in 1904. The exports increased from \$6,500,003 in 1904 to \$7,397,521 in 1905. A marked advance was shown in rice, raw cotton, machinery, and raw sugar. The recent establishment of the Dairi refinery caused a jump in importations of sugar from \$901,638 in 1904 to \$1,372,614 in 1905, while the import of refined sugar decreased from \$219,709 to \$14,243. Cotton imports were \$1,673,917 in 1904 and \$2,466,332 in 1905. Flour imports decreased from \$488,006 to \$453,172 and kerosene from \$248,702 to \$212,259. Machinery showed a great increase, being \$367,398 in 1904 and \$966,671 in 1905. Other iron and steel goods aggregated \$443,383. Fertilizers developed from \$94,101 worth in 1904 to \$411,519 in 1905.

Moji's total purchases from the United States were billed at \$1,695,695 in 1905, being all the kerosene, most of the flour, and large quantities of raw cotton, locomotives, cars, and building material.

Kuchinotsu is the third most important port in this consular district, but the imports there amounted to only \$123,682 in 1905, while exports were valued at \$2,393,020, mostly coal. Shimonoseki, on the straits

opposite Moji, last year imported \$662,357 worth of commodities, and exported \$986,016 worth. Karatsu bought only \$8,346 goods abroad, but sold \$766,244, largely coal. At Wakamatsu American machinery has been installed by the Brown Hoisting Machinery Company for loading cargo coal which promises a large development in the trade. Wakamatsu exported \$578,624 of coal, while the Imperial ironworks there imported \$131,573 iron ore. These works already represent \$15,000,000, and the Government has voted \$625,821 for expenditure over a period of five years. There is also an appropriation of \$890,607, which, it is said, is the first installment of \$5,000,000 to be spent for the works. The attention of American exporters is called to the fact that plans for next year include the placing of orders for machinery.

The trade of the five remaining ports in this consular district is small, being \$285,513 for Idzbara, \$77,384 for Hakata, \$70,597 for Sasuna, \$50,955 for Shishimi, and \$17,569 for Misumi.

NEW MAIL ROUTE TO PHILIPPINES.

The merchant vessels which entered the ports in the Nagasaki district in 1905 numbered 5,864, with a total tonnage of 6,425,288. With the resumption of service of the Toyo Kisen Kaisha's steamers to San Francisco and of the Nippon Yusen Kaisha's European and Australian services, the shipping returns of this district may be expected to show an increase, and will also doubtless share in the general increase of Japanese shipping in the Far East.

A line of steamers proposed from Yokohama to Manila via Nagasaki and Formosa indicate a new service of mails to the Philippines, the bags being taken from the ships at Yokohama, conveyed to Nagasaki by rail, there reshipped for Formosa, and (when the trans-Formosan line is completed) carried the length of that island by rail, then put on steamers again for Manila. This will effect a great saving in time taken for the mails from San Francisco or Seattle to the Philippines.

BUTTER AND MILK.

Consul Harris reports as follows on the dairy interests, purchase of cream separators, and imports into Japan of dairy products:

The Japanese imports of cream separators are as yet limited, the number being five in 1905 and the value \$203. There is no present demand for these in this island of Kiushu, as few farmers have more than one cow, except the few small dairymen near the towns. The island of Houshu has somewhat better dairy cows. [A list of Japanese general importers, given by Mr. Harris as firms who can give further advice on the subject of mercantile opportunities, can be obtained from the Bureau of Manufactures.]

America furnished about half of Japan's \$70,164 butter imports in 1902, but less than one-fourth of the \$66,930 imports in 1905. America also furnished nearly two-thirds of Japan's \$15,156 cheese purchases in 1902, but less than half of the \$12,755 purchases in 1905. But the United States is gaining the condensed-milk trade of Japan, the total imports of which were \$323,154 in 1901 and \$804,190 in 1905. The shipments from America were \$125,458 and \$457,247, respectively.

GENERAL ENTERPRISE.

FLOATING EXHIBITION—COD FISHING—BEER EXPORTS.

Consul Henry B. Miller, of Yokohama, furnishes a number of Japanese commercial and industrial items of considerable interest, clipped from Japanese newspapers:

It is stated that the Satsuma Shokai, a leading commercial firm in Tokio, are preparing a floating exhibition on the *Yahiko-maru*, a Port Arthur blockading steamer, which has been raised by the firm, and the Kogyo Chukaishi (Industrial Agency) of Tokio has agreed to organize the exhibition.

Shares in the Japan Fishing Company, which has been just floated in Tokio with a capital of \$5,000,000, having all been subscribed, the general inaugural meeting of shareholders was held and directors and other officials elected. Two fishing boats, each of 140 tons, now being built in Tokio, have just been launched. Upon their completion cod fishing after the American method will be started in the Okhotsk Sea.

The market for Japanese beer in Manchuria, Korea, and North China has greatly increased, the annual export value, which has not heretofore exceeded \$500,000, being estimated to reach \$750,000 this year, as trade with Vladivostok has been reopened. The demand is also steadily increasing among the Chinese and also in the South Sea Islands, and it is expected that the export of beer will total in value \$5,000,000 within the near future. The incorporated company has decided to strictly avoid competition at home, concentrating its energy upon the development of trade abroad. Under present conditions the company will be able to declare a dividend of at least 15 per cent.

KOREA.

DEVELOPMENT OF COMMERCE.

The British foreign office has recently issued a report from its consul on the trade of Korea in 1905. The report furnishes plenty of evidence of the all-pervading influence of Japan in Korea, but for the moment it is not to be found in any large expansion of commerce. The total trade is returned at nearly \$20,000,000 as compared with \$17,000,000 in 1904. But the consul states that the former figures are delusive, and that actual business was very unfavorable in 1905 and promises to be still worse in 1906. The reaction after the Russo-Japanese war accounts for much of the dullness, and to this has been added the inadequate character of transportation service and a currency system in a state of chaos. The partial failure of the rice crop further greatly diminished the spending power of the population. The Japanese grappled with the currency question, and no doubt in time their reforms will introduce the desired stability. The British consul says that as the country recuperates under an administration of the firmness of which there is now some guarantee, there should be plenty of openings for new trade. There are no reliable figures, but the British consul thinks that a fair calculation will fix the British imports into Korea at 40 per cent of the total imports.

STRAITS SETTLEMENTS.

SHIPMENTS FOR FIRST HALF OF THE YEAR.

The following statement furnished by Consul-General Wilber, of Singapore, shows the quantity, in tons (2,240 pounds), of exports in the principal articles from the Straits Settlements, including the ports of Singapore and Penang, during the first six months of the calendar years of 1905 and 1906 to the United States direct, to England, the continent of Europe, and total to all countries. The value of the exports to the United States direct for the first six months in 1906 is \$9,565,788, against \$9,857,730 for the same period in 1905, a falling off of \$291,942 in 1906.

	United States.		England.		Continent of Europe.		Total all countries.	
	1906.	1905.	1906.	1905.	1906.	1905.	1906.	1905.
	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>
Tin	8,040	10,616	20,573	17,080	4,219	4,595	32,832	32,291
Gambier	7,549	7,633	3,471	4,669	4,888	2,993	15,608	15,295
Gambier, cube.....	937	703	396	431	457	523	1,790	1,657
Rattan	2,410	1,727	1,495	1,532	6,107	5,703	10,012	8,962
Gum copal.....	2,359	2,232	1,406	1,177	1,031	658	4,796	4,067
Gutta percha.....	96	288	808	1,236	551	468	1,455	1,992
Gum jeletong.....	4,519	6,910	315	438	731	487	5,565	7,835
Rubber	632	411	558	437	590	334	1,780	1,182
Pepper:								
Black	3,141	3,942	1,074	1,025	3,744	3,075	7,959	8,042
White.....	888	542	854	1,115	1,554	888	3,296	2,545
Cloves	126	25	65	21	1	.....	192	46
Nutmegs.....	283	209	115	58	8	17	406	284
Sago	2,725	908	12,865	13,302	8,234	7,394	23,824	21,604
Tapioca.....	6,481	5,668	10,562	12,872	4,504	5,633	21,574	24,173
Coffee.....	149	171	.....	3	224	306	373	480
Pineapples.....	a 41,181	a 42,615	a 238,076	a 169,161	a 23,161	a 22,219	a 302,418	a 233,995

a Cases.

EXPORTS FROM SINGAPORE.

The following table shows the principal exports by articles from Singapore, June 16 to 30, inclusive, and now en route to the United States, England, and the Continent of Europe:

	United States.	England.	Continent of Europe.
	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>
Tin	470,666	2,241,600	253,200
Gambier.....	282,233	270,933	1,451,066
Sago.....	485,600	592,266	1,644,666
Pepper:			
Black.....	648,533	.....	160,800
White	305,466	22,400	87,466
Gutta percha.....	28,933	67,333	111,200
Rattan.....	196,000	152,533	482,133
Nutmegs	61,200	3,333	.....
Gum copal.....	462,800	285,066	166,800
Tapioca.....	1,052,666	920,800	403,733
Rubber	103,466	42,800	75,066
Gum jeletong.....	1,282,000	.....	46,000
Coffee .....	.....	.....	56,266
Pineapples	a 15,192	a 26,006	a 1,695

a Cases.

EXPORTS FROM PENANG.

The following articles were exported from Penang from June 1 to 30, inclusive:

	United States.	England.	Continent of Europe.	Total all countries.
	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>
Tin	1, 177, 333	3, 138, 266	673, 333	4, 988, 932
Pepper:				
Black	505, 200	112, 400	124, 266	741, 866
White			44, 983	44, 983
Cloves	8, 333	2, 900		6, 133
Rubber		65, 733	18, 983	84, 666
Nutmegs	98, 533	8, 666		107, 199
Tapioca	978, 933	1, 946, 133	177, 066	2, 123, 199

REDUCTION OF TIN OUTPUT.

Consul-General David F. Wilber, of Singapore, writes that the reports for this year made by the commissioner of mines of the Federated Malay States show a decline in the output of tin compared with last year, while the total exports show an increase for the six months of this year over those of last year.

The reports all along this year, made by the commissioner of mines of the Federated Malay States, show a decline in the output from all the tin bearing Malay States of the Peninsula, as compared with last year, while the total exports show an increase for the first six months of this year over last.

For the first six months of the years 1905 and 1906, the shipments of tin from Singapore and Penang were as follows, given in tons of 2,240 pounds:

Countries to which shipped.	1905.	1906.
United States	10, 616	8, 040
England	17, 060	20, 573
Continent of Europe	4, 595	4, 219
Total all countries	32, 291	32, 832
Increase over 1905		541

OCEANIA.

A U S T R A L I A .

NEW STRICT TRADE REQUIREMENTS.

DESCRIPTION OF GOODS REQUIRED BY COMMONWEALTH GOVERNMENT.

Consul F. W. Goding, of Newcastle, furnishes a summary of the new Australian commercial act, which came into force June 8. The objects sought to be attained by it are—

(1) To protect those traders who correctly describe their goods from competitors who, by false or misleading descriptions, deceive the public, to the disadvantage of the honest manufacturer who may have established a reputation for a good article.

(2) To protect the public by requiring, in cases where the proper maintenance of the public health demands it, that manufacturers shall indicate on their goods the nature of the ingredients or materials of which they are composed.

(3) That the reputation of the national industries of Australia may be maintained and properly increased by insuring that inferior kinds of an Australian production shall not be permitted to masquerade under a description which is applicable only to the best quality.

Under the act the following system will be put into force: Power is given to frame regulations prohibiting the importation or exportation of certain goods which are specified in the act, unless a trade description of such character relating to the matter and applied in such manner as is described. These goods are, however, limited in number and comprise only articles used for food or drink by man, or used in the manufacture or preparation of such articles, medicines or medicinal preparations (internal or external), manures, jewelry, seeds and plants, and apparel and materials for its manufacture. By these regulations the trade description must be in legible characters, in a prominent position; must show the exact nature of the goods, actual country and place of produce or manufacture, with variations for different articles.

The importation or attempted exportation of goods which under the regulations should have a trade description applied to them, and which do not have such necessary trade description, would make the goods in question liable to forfeiture unless it is shown that the breach of the regulations did not occur either knowingly or negligently, in which case power is given to restore the goods, on security being given to apply the trade description or (in the case of imports) to immediately export them. If imported goods which ought to have a trade description applied to them are found in Australia in the cover in which they were imported, but without the trade description, then the owner must show that no breach of the act of regulations has taken place, a breach being assumed until the contrary is proved.

PENALTIES FOR FALSE DESCRIPTION.

The act makes provisions to prevent the use of false trade descriptions. A penalty of \$500 is imposed where goods with a false trade description are imported, the goods themselves are prohibited from being imported, and if imported shall be forfeited to the King. If an importer does not knowingly contravene the regulations he may be allowed to correct the description. The same rules hold with regard to goods intended to be exported. The person who knowingly applies such false trade description to the goods, or knowingly attempts to export goods so falsely described, is liable to a penalty of \$500. The goods themselves are prohibited to being exported and forfeiture will follow if they are exported or if attempt be made to export them.

It is further provided that where there are trade secrets of manufacture or preparation the regulations shall not require such a trade description as would necessitate their disclosure, unless such disclosure is necessary for the protection of the health or the welfare of the public. To insure the proper working of the act, provision is made by it for a system of inspection of all goods which are exported or imported. Where required by the regulations, notice of intention to export must be given and a place where the goods may be inspected.

With these two acts their operation is limited in extent. They do not apply to transactions taking place wholly within one State, but only to trade and commerce with other countries and between the States.

OPERATION TEMPORARILY SUSPENDED ON IMPORTS.

In deference to the general wish of the commercial community, the Federal minister for trade and customs has decided, according to the Sydney correspondent of the London Commercial Intelligence, that the import regulations under the new commerce act are to be suspended for six months. Those relating to the export trade, however, will come into operation without delay. Sir William Lyne is also causing inquiries to be made with a view to prohibiting the export of adulterated leather.

The first case under the Federal commerce act proved instructive. A consignment of so-called gold rings was stopped in one of the States, suspicion of their real character being entertained. They were stamped as 9 carat, but were found to be only 3 carat, and thus practically not gold at all. Had they been entered as imitation jewelry and without the misleading mark no notice would have been taken of them. As it is, the importers, if found to have any knowledge of the attempted fraud, will be liable to heavy punishment, and in any case the shipment confiscated.

THE WOOL INDUSTRY.

INCREASED PRODUCTION AND EXPORTATION.

Consul-General John P. Bray, of Melbourne, furnishes a timely report on the status of Australasia's wool trade. He writes:

During the Australasian wool season of 1905-6, just closed, 1,869,455 bales of wool were exported, valued at \$122,932,710, against 1,595,734

bales, valued at \$98,267,696, for the preceding season, a net gain of \$24,665,014. Adding the wool locally consumed the production for 1905-6 is valued at \$124,905,462. At the end of the year 1905 there were 93,836,545 sheep in Australasia, an increase of 10,517,031 over 1904, which is by far the greatest addition to the flocks which has taken place for many years. The number of sheep in each State of Australia and New Zealand at the end of 1905 and 1904 was as follows:

States.	1905.	1904.
New South Wales.....	39,494,207	34,531,145
Victoria.....	11,455,115	10,167,691
Queensland.....	12,535,231	10,843,470
South Australia.....	6,524,300	5,298,720
Western Australia.....	3,140,360	2,600,683
Tasmania.....	1,556,460	1,597,053
Australian States.....	74,705,673	65,038,712
New Zealand.....	19,130,875	18,280,805
Australasia.....	93,836,548	83,319,517

EFFECTS OF THE DROUGHT.

One of the most noticeable features of the industry is that whereas before the drought 120,000,000 sheep were shorn, yielding 1,959,811 bales, last year 93,000,000 sheep produced 1,869,455 bales, showing that twelve years ago it took the fleeces and skirtings from, say, 61 sheep to fill a bale, whereas last year the wool (fleeces and skirtings, etc.), from, say, 50 sheep did so; while in regard to values, the former clip realized in Australia £10 10s. (\$51.09) per bale, as against £13 10s. (\$65.69) per bale last season, showing the net return per sheep at the present time to be 1s. 11½d. (47 cents) per head better than at the earlier date. There has been no improvement in the quality of the wool, and the explanation, therefore, would appear to be that the oldest and worst sheep were the first that perished when the enormous losses in the flocks through drought lately occurred, while such a curtailment in the wool supply resulted in a natural enhancement in value.

Of the locally sold wool (72 per cent of the production), 28 per cent was purchased by English buyers, 57 per cent by continental buyers (German, French, etc.), 6 per cent by American, 1 per cent by Japan, China, and India, and 8 per cent by local manufacturers.

COMMERCIAL EDUCATION.

According to Consul Goding commercial education is interesting the people of Australia and New Zealand.

The New Zealand University has established a chair of commerce, and will give to successful candidates the degree of bachelor of commerce. Only matriculated students of the university are eligible. The final examinations are of a purely business character and consist of commercial law, statistical method, commercial French or German, accountancy, and two of the following: Actuarial mathematics, industrial law, economic history, and currency and banking. The Sydney University has resolved to likewise take up commercial education.

SOCIETY ISLANDS.**DECREASE IN VOLUME OF FOREIGN TRADE.**

Consul W. F. Doty, of Tahiti, reports on the trade of the Society Islands as follows:

The total volume of trade of the Society Islands for the calendar year 1905 marks a decrease as compared with that of 1904. The imports of 1904 were \$134,004 less than those of 1903, while those of 1905 show a decrease of \$35,853, deducting specie (\$19,196), compared with 1904. The imports in 1904 amounted to \$602,119, and in 1905 they were \$566,266. The exports in 1904 were \$656,082, and in 1905 amounted to \$574,229.

The principal countries of import were: United States, \$282,209; New Zealand, \$105,902; France, \$128,989; England, \$26,221, and Germany, \$12,826. The value of exports by countries were: United States, \$350,983; New Zealand, \$32,526; France, \$108,482; England, \$64,713, and Germany, \$257.

With regard to imports the decrease is to be accounted for by the diminished purchasing power of the community, due to tardy sales and lessened demand for mother-of-pearl shell and vanilla beans, and by the withdrawal of the military garrison and the war vessel of the station. The decrease in exports is also due to the dull market in the two principal products, mother-of-pearl shell and vanilla beans. During 1905 no diving machines were used, with the result that only 254 tons of shell were produced, as against 624 tons in 1904, representing a loss of \$112,200. The export of beans was 48,000 pounds less than in 1904.

The principal articles of import were: Prints, \$104,916; flour, \$69,031; tinned meats, \$21,821; coal, \$20,946; soap, \$15,723; copra, \$13,438; salmon, \$15,855; wine, \$13,031; lumber, \$11,068; iron pipes, \$5,282; boots and shoes, \$6,078; sugar, \$4,200, and hardware, \$4,462.

The trade with the United States amounted to \$587,156 in 1904 and \$633,192 in 1905, a gain of \$46,036. The imports in 1905 amounted to \$282,209 and in 1904 to \$312,516, a decrease of \$30,307, while the exports in 1904 were \$274,640 and in 1905 they increased to \$350,983, a gain of \$76,343. The principal imports were: Flour, \$68,967; dry goods, \$47,012; tinned salmon, \$12,706, and lumber, \$12,994. The chief exports consisted of copra, \$273,022; vanilla beans, \$42,936; cocoanuts, \$13,739, and mother-of-pearl shell, \$1,300.

NEW ZEALAND.**INCREASED FOREIGN TRADE.**

According to a report by Consul-General Prickitt, of Auckland, New Zealand is enjoying a period of remarkable prosperity and progress—if figures showing a big trade balance in its favor are significant or symptomatic. During the first three months, according to the statement forwarded by Mr. Prickitt, the imports of the colony amounted to \$18,855,537, the exports to \$34,541,000. The principal exports were butter and cheese, \$4,749,704; gold, \$2,550; frozen meats, \$3,387,000; phormium (New Zealand), \$1,100,000; skins, \$729,000, including 1.524,996 rabbit skins, valued at \$82,000; wool, \$19,000,000.

AFRICA.

EGYPT OF COMMERCE.

A LAND OF STEADY DEVELOPMENT.

RETROGRESSION OF AMERICAN TRADE—INTENSE RIVALRY OF EUROPEAN FIRMS.

A clear insight into the commerce of the Egypt of to-day is given in a comprehensive trade review of that country by Lewis Morris Iddings, consul-general at Cairo, who describes American exporters' shortcomings in plain language. The wrong way of selling goods to Egyptians is illustrated by practical examples. The chief interest Americans seem to have at present in Egypt is in pleasure, our tourists spending nearly \$4,000,000 there annually, and in the purchase of over \$7,000,000 worth of Egyptian products, whereas the United States sells to Egypt less than \$1,500,000 of commodities, and these are dwindling. Mr. Iddings' report follows:

The prosperity of Egypt apparently increases every day. The oldest country in the world is wild with speculation, and Cairo is the center of it. It is not clear why the prices of town lots, villa sites, and shares of all kinds, especially shares of land and building companies, should constantly go higher, but they do. Many observers attribute this to the high price of cotton, which is Egypt's greatest product, and to the desire of the prosperous Mohammedan to buy land. His religion forbids the believer to receive what is called usury, but he may invest in land and take rent. To the south of Egypt is the Soudan, an enormous territory to develop, and the routes to it are the Nile, the Suez Canal, and the Egyptian and Soudan railways. Still farther south stretches almost an entire continent, which presently may be reached most conveniently by the trade routes just mentioned. The good Mohammedan, the price of cotton, and the Soudan, therefore, it is argued, will always keep Egypt at least at the present degree of prosperity. The English occupation is a guaranty of law and order. Anywhere else one would say that a revulsion must come and that values must fall pretty soon. There is almost no manufacturing here, and Cairo has the whole desert to spread over.

PROSPERITY WHICH AMERICA SHOULD SHARE.

Whatever the causes may be, Egypt at present is doing a great business, and the United States ought to be getting much of it. That we get very little is largely our own fault, despite the obstacles we have to encounter. Probably some American manufacturers are already

too prosperous to care much about trading abroad; but letters from others received at this office indicate that a good many business men in the United States are anxious to make profit out of Egypt. This can not be obtained without effort and an earnest study of commercial conditions. Yet again the character of inquiries received at this consulate-general from America concerning trade indicate that the inquirers neglect sources of information already offered to them. Apparently they have never read our Daily Consular and Trade Reports, which the London Times recently declared to be models of what such publications should be. Egypt can get along without American manufactures. She finds a ready market for all she may export, and England, France, and Germany will sell her everything she wants on extremely liberal conditions.

The American trader must understand that Egypt is a purely agricultural country, exporting almost entirely agricultural products only. In return she requires practically every modern manufacture. Egypt must import food stuffs. Land is too valuable for grazing purposes, so her flesh food comes in on the hoof or in cans. It is cheaper to import white corn than to raise it on lands which will grow cotton. Hence the big jump in her imports of maize in 1905. The palm, the orange, and other trees are too valuable for timber, so all timber must be brought from abroad. There are no great mineral deposits as yet available, therefore coal and other fuel, rough and worked metals and machinery, furniture, glass, crockery, and everything from the conventional national head dress—the bright red tarboosh—to native foot wear must be imported.

CREDIT AND SETTLEMENTS.

Why should manufacturers, anxious to gain a footing in the Eastern markets, still insist upon imposing inflexible rules laid down years ago? Methods must change with new conditions. In Egypt the great merchant and the peddler alike give and receive credit. Indeed one's standing is gauged by the amount of credit which he can command. Yet the American manufacturer demands cash with order and wants the use of the Egyptian merchant's money for several months before the latter receives his goods. Often as not the goods arrive too late for that year's operations, especially in agricultural machinery. The local merchant, being under time contract for delivery, with penalty of cancellation of order, is quite helpless as between himself and the American manufacturer. In order to get his money back he must in such cases, when his goods eventually arrive, add cost price to freight and insurance, customs and transport to Cairo, as well as interest charge for his capital laid out. Then he must sell the goods on credit.

Credit varies with textiles, machinery, hardware, leather goods, perishable articles, and others liable to deteriorate in consequence of climatic conditions, and is also influenced by the intimate knowledge which people in Egypt have of the financial affairs of buyers or sellers. That there is no confidential commercial register which will give a man's business standing is perhaps one reason why Americans have insisted upon cash with order, which, however, will not work, and the American manufacturer must take chances with the other traders—Germans, Italians, and English.

For agricultural machinery part payment is taken in cash, balance in instalments. Textiles are invariably bought on credit, the risk of the seller being covered by "senads," a sort of promissory note split up into fractional payments due at varying periods from six months onward. Food stuffs find a ready market and are soon disposed of, so that large stocks are not held; but even for these credit is given. Settlements of accounts between the cultivator and the merchant take place annually after the cotton is sold—in November and December. With the shopkeeper and retailers settlement comes after the tourist season, in April, when the big hotels call their annual meetings and declare their dividends.

AMERICAN DELAY—NEW, QUICK, STEAMER SERVICE.

A legitimate complaint is of delay in the dispatch of goods ordered and paid for, and the utter indifference of the seller as to the route they are sent by, or as to how or when they will arrive. By the American commission-house system the American manufacturer loses all interest in a transaction as soon as he has received his cash and shipped the goods. I now have (June 30) documents and correspondence concerning goods paid for in New York on December 13, 1905, the bills of lading for which have not yet arrived. An equally bad case is that in connection with an order from Cairo for a certain agricultural machine. It was to be delivered last March. The machine left the factory packed in three cases; two of these have just arrived, the third is on the way, but by what steamer is unknown. Unfortunately, these are not exceptional cases, if what is often asserted by buyers is true.

There is no excuse for such delay. The North-German Lloyd's dispatch a vessel weekly from New York to Naples and Genoa, and with transshipment have landed goods here in eighteen days. In October or November, 1906, the Hamburg-America line will start a service from New York to the Mediterranean direct, and expect to land goods in Cairo in fifteen days. Will American business methods prevent possible purchasers of American goods from availing themselves of this new means of rapid transit?

American manufacturers, declining to deal direct with clients or entertain any instructions as to shipment, refer inquirers to a commission house. What happens? Here is another illustration of such lack of wisdom. Certain goods were ordered for Cairo and paid for. On arrival months later they were not found to be as ordered or as represented; the commission house was appealed to, but replied that having already indorsed the draft sent in payment of the goods in favor of the manufacturer, they were clear of the whole transaction, and the manufacturer refused to listen. Complaint is often heard, too, that business letters from America, when the least protest has been made, are couched in discourteous language. French, German, and English commercial letters are almost invariably polite even under considerable provocation.

RIVALS CLOSELY ON THE WATCH.

Some months ago the Egyptian newspapers announced that certain American manufacturers had combined to send out a joint commission to Mediterranean ports and Egypt with samples of all our manufactures; that trade experts would accompany the commercial travelers,

who were instructed to inquire into the trade conditions prevailing not only at seaports, but also at interior towns. Similar commissions had formerly been fitted out in Europe, and even from New Zealand and Australia. Later it was reported that the expedition was postponed until autumn.

Europeans took the point. Travelers from continental houses were hurried to Egypt, not only with samples, but with consignments of goods and with instructions to leave the merchandise somewhere in the country whether the conditions of payment desired could be obtained or not. In the case of articles intended to cut into a market already existing, but supplied from elsewhere, credits from nine months to two years were given. In other words, the goods were left here for sale, and the retailers did not have to advance a penny of capital for them. How, then, can American manufacturers hope to hold onto such trade as they still have if they insist upon imposing their present system—"cash with order;" "order through a commission house?"

Here are two examples: The general manager of a Cairo company whose capital is \$1,000,000, requiring some spare parts of machinery, wrote to the manufacturers in America for the same. Not knowing the price, he instructed the manufacturer to draw upon him. In reply he received a letter saying that the value of the goods ordered was \$125, and that on receipt of this sum the goods would be started. In the other case the manufacturer regretted that he was not able to send the goods, as he had given his representation for Egypt to a commission house. Thus these orders had to be placed elsewhere and not in America. This way of dealing can not be called encouraging business.

EXPANDING MACHINERY MARKET—AMERICANS LOSING.

It is in iron and steel manufactures, machinery, and kindred industries, especially for every description of agricultural machinery and implements, that Egypt offers the widest field for expansion, yet it is precisely in these articles that imports from the United States are most rapidly running down. The American manufacturer apparently will not build machines adapted to the soil and climatic conditions of Egypt and the Sudan; he will not believe that his deep-plowing machines ruin the land by turning up the salty soil below, nor that machines which will do the work claimed for them in America can possibly break down and fail to work at all in Egypt. He will not put in a bit of extra metal here and there to strengthen parts and give his machine some chance under adverse conditions; he will not "finish" or protect those parts of a machine which the fine sand of the desert can enter so easily and constantly; he will not, as implored, cast his gearings in steel instead of iron of such dubious quality that it has been characterized as "slag;" he will not do much of anything that he is asked to do, but will simply dispatch the goods for which he has been paid in advance just how and when it suits him.

It is significant that nearly everyone who has set up in business in Egypt intending to deal exclusively in American goods—machinery or what not—has found it advisable to speedily change his policy. Here is a case in point: A merchant, having wide connections with Egyptian

landowners and finding that others were abandoning a certain line of business, purchased, for cash, American stock to the value of \$200,000. He also paid the expenses of the maker's engineers to come to Egypt, set up the machinery, and superintend the first workings. The cast-iron gearings broke. Then the spare parts were fitted and also broke. The engineers declared that cast-iron gearings could not stand the strain. Gearings in cast steel were telegraphed for, but cast-iron parts were sent instead, and these likewise broke. In desperation the broken parts were shown to a local founder, who readily cast them in steel, which stood the strain, cost 50 per cent less than the parts brought from America, and were delivered within a week.

Of the \$200,000 order sent by this merchant to America, stock to the value of \$60,000 still remains on hand, and he is now buying his goods in England and Germany. The English and the Germans, he says, treat him decently. Other people who claim experience declare that American machinery in general is light, flimsy, unfinished, and defective in workmanship. All these defects, if real, might be so easily remedied.

The Egyptian Government decided within a year not to buy any more American locomotive engines because they consumed so much more fuel than locomotives from Germany and England.

ONE SUCCESSFUL DEALER.

There is, however, one dealer in Cairo who makes much profit out of a certain American article. He went to the United States, explained the conditions of trade in Egypt, and personally made arrangements for quick shipments. His goods arrive in fifteen to eighteen days, and freight, duty (8 per cent ad valorem), insurance, etc., only add 13½ per cent to the first cost. This man—active, honest, and intelligent—is making money. German manufacturers have now deposited similar goods with him to sell for what he can get and to pay for them when he likes. All they ask is to have a market made for them.

Credit must at least be given until the goods are landed in Egypt. The nervous exporter may insure himself by sending shipping documents through a bank which would deal with the consignee on the arrival of the goods. The advisability of rapid dispatch and quick routes would then be made manifest to him.

It is useless for manufacturers in the United States to send bundles of catalogues, etc., to consular representatives, begging that they be handed to local dealers and to try and push American trade interests, when they refuse to take the slightest notice of the advice given them in consular reports as to how those same trade interests can be exploited.

ROOM FOR AN AMERICAN BANK.

It has been suggested that the lack of an American banking establishment in Egypt has something to do with the unsatisfactory state of American trade relations. I am assured that there is not only room for such a bank, but that a wide business range for it exists. At present all transactions with America have to take place through Paris and London, and this does not lower prices or facilitate trade. The maximum legal rate for bank loans is 9 per cent. The banks ask this in ordinary

cases, then take a commission, and compound the interest due every three months, thus netting 12 per cent.

While other countries have been investing huge sums in Egyptian securities no American capital has been invested here, not even in the hotels, of which 60 per cent of the patronage comes from America. The nominal capital of the company hotels in Egypt is \$12,000,000. Visitors annually number between 10,000 and 11,000. The average duration of their stay is sixty days, and the expenditure per head is \$10 per day. It therefore appears that American visitors spend annually in Egypt no less than \$3,780,000, and a reference to the table of imports and exports in the second part of this report will show that the balance of trade against America is a like sum, viz, \$3,813,805. The sums paid for passage money, railway fares, etc., are not considered in the above figures.

FOREIGN TRAFFIC.

REMARKABLE INCREASE OF IMPORTS AND EXPORTS—SMALL SHARE OF THE UNITED STATES.

Those who desire to seriously study the trade conditions of Egypt should read the statistics given herewith by Consul-General Iddings. Egyptian exports and imports for last year compared with those for 1889 are given, and the comparison forcefully presents the remarkable advancement made by this interesting country in so short a period:

	Imports.	Exports.
1889	\$35,104,805	\$60,332,495
1905	107,820,380	101,801,425

Trustworthy statistics of the interchange of commerce between Egypt and the United States are not procurable, mainly because Egypt's over-sea trade is carried in foreign bottoms and transshipped from continental ports. The table here given shows that American imports into Egypt are not increasing as they should, in view of Egypt's increased exports to America. The table which follows shows the percentage of Egypt's total exports that went to the United States and the percentage of the total imports received from the United States.

Year.	Exports.	Imports.	Year.	Exports.	Imports.
	<i>Per cent.</i>	<i>Per cent.</i>		<i>Per cent.</i>	<i>Per cent.</i>
1889	0.2	0.8	1898	7.3	3.0
1890 .....	.2	.5	1899	8.6	2.0
1891 .....	.6	.2	1900	6.1	2.1
1892	1.3	.4	1901	6.3	2.1
1893	1.9	.4	1902	6.6	1.3
1894	2.7	.5	1903	4.8	1.4
1895	3.7	.6	1904	3.3	1.4
1896	6.9	.8	1905	6.2	2.3
1897	7.8	1.1			

In 1889 Germany received 0.1 per cent of Egypt's exports and sent to Egypt 0.7; in 1905 Germany received 8.5 per cent of the exports and returned 4.4 of the goods imported into Egypt.

AMERICA'S SHARE OF EXPORTS.

Opposite the total exports from Egypt in 1905, as tabulated herewith, are placed the value of the declared exports to America:

Articles.	Total ex-ports.	To America.
Quails (migratory), eggs, etc	\$502,635	\$350
Hides, skins, leather	641,160	3,935
Other animal products	444,495	1,935
Cereals, vegetables, etc	13,652,285	19,250
Sugar, gum arabic, etc	3,148,000	152,655
Cotton-seed and other oils	90,680	155
Rags and papers	69,815	330
Oriental furniture, mats, etc	71,545	385
Stone, earthenware, glass, etc	11,860	.....
Henna and other vegetable dyes	135,995	.....
Dried roots, leaves, salt, natron, etc	74,545	4,865
Cotton and other vegetable fibers	79,809,825	6,064,330
Metals and worked metal goods	100,625	.....
Sundries	276,100	9,490
Total.....	99,029,565	6,257,680

The value of the cigarettes exported is eliminated. These are manufactured from an imported leaf, the cultivation of tobacco in Egypt having been prohibited eighteen years ago. The fifth item of exports to the United States from the above list was practically all gum, sugar shipments having ceased during the last two years. In the years 1899, 1900, and 1901, America bought an average of \$2,500,000 worth of cane sugar from Egypt. Cane growing has given way to cotton.

WHERE THE CHANCE OF INCREASED PROFIT LIES.

The imports into Egypt in 1905, a general table of which follows, deserve close attention. The first column of figures gives the total value of the imports by categories; the second column the value of the imports from America analyzed to show the specific articles in the import of which we are already interested. The last column gives, where requisite, the total value of these specific articles. At a glance, therefore, the American exporter may see for himself just what Egypt requires annually of the article he now sends, the value of what he actually sends, and the chance of increase he has. For instance (Category I), America sends \$6,065 of smoked and salt hams and other dry-salted goods (not for the Mohammedans, of course, who eat no pork, but for Europeans), while the value imported is \$450,000. It is surely worth while to try for some of this extra \$443,000.

Imports, 1905.	Total of im-ports.	From United States.		Total value of the speci-fied goods.
		Value.	Articles.	
Animals and animal products.....	\$5,895,525	\$6,065	Salt and smoked hams, dry salted goods, etc.	\$450,000
Hides, boots and shoes, leather goods.	1,541,140	44,125	.....	.....
Animal fats, oils, candles, etc.....	420,815	610	.....	.....
Cereals, flour, vegetables, fruits...	13,963,100	403,700	Maize	938,945
		1,150	Flour	4,947,325
		705	Dried fruits	1,160,555
		900	Dried vegetables.....	.....

Imports, 1905.	Total of im- ports.	From United States.		Total value of the speci- fied goods.
		Value.	Articles.	
Sugar, coffee, tea, spices, pre- served fruits.	\$4,667,535	\$934,965	Coffee.....	\$1,222,995
		2,925	Preserves	369,210
		3,710	Beer	460,365
		6,760	Spirits	705,595
Wine, beer, spirits, oil.....	4,926,760	90,860	Cotton-seed and other oils.....	1,085,225
		215,575	Petroleum	1,350,890
		124,440	Sundries	
Paper, stationery, books.....	1,566,660	3,270		
		280,430	Timber	6,646,095
		7,975	Furniture.....	1,034,630
Timber, furniture, carriages, woodenware, charcoal, coal.	13,393,895	5,165	Carriages, etc.....	308,550
		810	Wooden utensils.....	227,295
Stone, marble, cement, earthen- ware, etc.	2,447,130	1,455		
Indigo, dyes, colors.....	1,327,245	2,720		
		7,560	Patent and other medicines....	290,580
Chemicals, medicines, perfumery, etc.	2,285,800	5,750	Scents, soaps.....	709,750
		375	Herbs, etc.....	235,600
		160	Sundries	
		820	Cotton goods.....	14,995,655
		1,975	Sail cloth	88,265
		1,145	American cloth, linoleum, etc.	134,515
Textiles	30,264,245	50	Cordage.....	291,805
		75	Linen goods	1,510,905
		430	Clothing	1,638,565
		12,340	Sundries	
		42,620	Wrought iron and steel	5,896,510
		13,585	Tools and utensils	327,975
		665	Copper and brass	1,122,240
		1,635	Lead and tin.....	299,500
Machinery, iron and steel, metals, etc.	14,183,825	163,200	Machinery	4,279,130
		2,025	Wagons	1,493,560
		50	Gold, silver, and jewelry	466,760
		3,900	Sundries	
		12,490	Hardware; haberdashery.....	1,833,185
General goods	7,499,970	2,640	Lamps; stoves.....	252,470
		15,605	Electrical apparatus	971,860
		6,965	Sundries	
Total	104,383,445	2,433,875		

Unless the American manufacturer realizes that it is to his own interest to make a fair and critical study of the Egyptian requirements as shown in the above table, his fast dwindling trade will soon reach the vanishing point. To illustrate once more—if from the total imports from America we deduct the value of coffee (\$934,965), the exceptional import of corn (\$403,700), rough timber (\$280,420), and petroleum (\$215,575), we have a total of \$600,000 representing the value of our manufactures sent to Egypt in return for her agricultural products valued at \$6,300,000. Even the total of \$600,000 will be reduced this year by \$200,000, for last year it included orders to that amount for manufactures of machinery, iron and steel, which the United States will not, under present conditions, receive in 1906.

COMMISSION OF TRADE INQUIRY SUGGESTED.

American manufacturers might well cooperate in sending out representatives to report to them direct if they are in earnest in wanting Egyptian trade. For example, all those interested in the manufactures included in machinery, iron and steel, metals, hardware, haberdashery, toys, lamps, stoves, electrical apparatus, etc., should have no difficulty in coming to some mutual arrangement, the cost of the mission being divided. The same proposition would apply to other categories of trade. Some of the principal American trade journals might also see

the advisability of following the example given by trade journals of other countries, and associate themselves with the project.

The biggest field for the expansion of American trade being in iron and steel, these are mentioned as an illustration for such commissions. It should consist of a skilled mechanical engineer, a foreman founder, and a trade expert perfectly informed as to the cost of production in the United States. The duties of the commission would be to examine machinery under cover and in the open all over the country, from the moist and salt atmosphere of Alexandria to the heated and sand-charged air of Upper Egypt; to examine stocks carried of all iron and steel, brass and copper, lead and tin, and other wares, whether in the rough or finished. The commissioners should interview and collect all possible information from the engineers in charge of factories and machinery used on the large estates, and in particular should examine thoroughly American machinery relegated to the scrap heap. Other duties would be the collection of statistics and technical information and knowledge of the financial standing of dealers.

METAL BUILDING MATERIALS NEEDED.

The impetus recently given to the building trade in Egypt has called for large consignments of all descriptions of metal goods needed for building purposes proper and interior-fittings of superior quality. More metal fittings are required here than in similar buildings in America, doors and windows being much higher. A large proportion of these wares do not require that "finish" the absence of which in machinery is so loudly complained of. The commission should also bring with it a photographic outfit permitting of instantaneous and of time exposure pictures, the latter to secure views of parts of machinery which may not be removed, showing excessive wear and tear as a result of want of finish, sand grinding, lightness of construction, employment of soft or brittle metal, and other technicalities. Such photographs would be used in connection with the letterpress.

POWERS OF ATTORNEY.

One member of each commission should bring with him a properly attested power of attorney, authorizing him to act in the name of the various firms by whom he is sent. A joint document would suffice, naming him as a principal for all the firms. If this is not done the commission would be hampered in its work, for probably neither this nor any other consulate-general would give letters of introduction to Government departments, merchants, or large landowners to people who could not produce perfect credentials or who come as mere commission agents, obliged to refer home on the smallest points raised. Egyptians will not deal with anyone but principals, or persons authorized to act as such. A good many of them were badly deceived last winter by a seller of books who eventually proved to be without authority or responsibility.

Finally, the commissioners should carefully investigate all complaints made. They should study minutely the system upon which local agents might be appointed. The same merchant should hardly be allowed to sell barbers' hair clippers and mowing machines, safety razors and patent reapers, gocarts and locomotive engines, medicinal emulsions and engine grease.

ZANZIBAR.**COMMERCIAL CONDITIONS.****NOVELTY NECESSARY IN PATTERNS OF COTTON CLOTH.**

Consul Frederic MacMaster, of Zanzibar, details the market needs of that East African sultanate in the following practical letter:

This consular district has a native population of several millions and a European population of 2,500. The native market at present demands cotton cloths, both white and printed, and the amount expended each year for printed cloths, called khangas, runs into many hundred thousands of dollars. At present khangas are supplied almost entirely from the Netherlands. The khangas trade is one that might interest cotton-goods people, and the following information may be of use to them. Size of khangas, 2 yards long by 1½ yards wide. Designs are made by local merchants and are sent to mills. These designs vary greatly, as the natives demand frequent changes. At present those most in favor are pictures of railroad trains and street cars, due to an American company having installed a small railroad and a street car line here. Cost of khangas laid down in Zanzibar varies from \$4 to \$5 for twenty pieces. A large amount of a cheap grade of enamel ware and cutlery is imported from Germany and Switzerland.

As to native upcountry trade, the demand at present is for copper, brass, and steel wire, which is largely imported from the United Kingdom; most of it is entered at Mombasa, although \$12,000 worth was entered at Zanzibar during the fiscal year ended June 30. Germany practically controls the native import trade of British and German East Africa, including Uganda, for all classes of goods used, with the exception of white cottons. This is due to the fact that German firms in Mombasa and Zanzibar advance both money and stocks of goods to Indian and Goanese traders to make the upcountry trips, allowing them large commissions. Furthermore these goods come out in German ships which operate under large subsidies.

As to the European market there is a limited demand for canned goods, groceries, and furniture, roll-top desks being asked for.

EXPORTS OF CLOVES, RUBBER, ETC.—AGRICULTURE.

The exports of this consular district cover practically all articles which usually come from tropical countries. German East Africa is experimenting with cotton culture, not, however, with marked success, due to difficulty in securing labor. There is a small demand for agricultural implements from both countries. British East Africa has one fiber mill working, operated with American capital, and doing well. The export of crude rubber is increasing and will assume large proportions later on. A company at Naivasha, British East Africa, has a large concession and is beginning sheep raising, having imported a herd of 5,000 head, which from late reports were flourishing.

The islands of Zanzibar and Pemba furnish approximately 90 per cent of the clove crop of the world. This year's crop will be a small one, due to extremely heavy rains in Pemba, which island usually fur-

nishes about 65 per cent of the yield. The experts estimate a crop of 300,000 pasils (pasil=35 pounds) for Pemba. The bulk of the copra shipped from here goes to Marseille.

FOREIGN TRADE.

The total imports into Zanzibar for the year ending June 30, amounted to \$5,852,416. The share of the United Kingdom in this trade was \$822,717, while Continental Europe furnished \$583,654 worth of goods, Africa \$2,516,174, Calcutta and Bombay, \$1,595,476, and the United States \$334,395.

The leading purchases from America were \$289,275 of piece goods, \$38,125 of petroleum, and \$2,048 of machinery. Great Britain supplied \$18,143 of tinned provisions, \$25,208 of groceries, \$21,440 of hardware, \$21,603 of iron sheets, \$122,189 of kaniki cloth, \$127,868 of khangas, \$62,038 of white shirtings, \$144,567 of sundry piece goods, and \$110,554 of coal. Europe also furnished \$111,642 of khangas, \$74,341 of sundry piece goods, \$31,639 timber, and \$21,631 tobacco.

ZANZIBAR IS PROSPEROUS.

According to the British foreign office, the trade of Zanzibar for 1905 would have established a record had it not been for the bubonic plague epidemic. Even as it was, the imports amounted to \$5,401,815, as against \$6,008,133 in 1904. The exports amounted to \$5,453,886, as compared with \$5,893,817. Great Britain's share in the total business was 48 per cent.

The crop of cloves, a product for which Zanzibar is famous, was the largest on record, and amounted to 26,444,000 pounds, as against only 12,770,000 pounds the previous season. The quarantine embargo has been lifted on the island, but as intercourse with some ports of the mainland of Africa is still under considerable restriction, the trade of the present year will not have full scope for recovery.

CHANGING KAFFIR TRADE.

NATIVE AFRICANS WANT MODERN CLOTHES AND FINERY.

To give an idea of the comparative and the potential value of the Kaffir trade in the districts of Inhambane, Gaza, and Lourenço Marquez, Major Baldwin, the British representative at the port of Lourenço Marquez, instances the consumption of wine.

He calculates that last year the total disbursements for wine by the natives in the districts in question amounted to almost \$2,500,000. The selling price of the other imports for the Kaffir market during 1905 is, at a moderate estimate, \$1,750,000, and the amount received in native taxes was, for approximately the same period, \$735,000 in hut taxes and about \$235,000 in immigration fees. The total disbursements amount, therefore, to over \$5,000,000 a year.

There are no accurate statistics of the native population, but it is reasonable to suppose that it is increasing and to infer that the annual sum available for the purchase of cloth, cutlery, clothing, foreign food stuffs, and other articles of the Kaffir trade will not diminish. It must, however, be remembered that the annual exodus and return of

natives to and from the Transvaal is having considerable effect upon their tastes generally, and a steady decrease in the demand for beads, blankets, and other articles manufactured solely for that market may be expected; on the other hand, however, Major Baldwin thinks a corresponding increase may be looked for in the demand for improved substitutes for these articles, especially in the way of ready-made clothing, jerseys, caps, boots, and cheap finery generally.

ST. HELENA.

LAST YEAR'S COMMERCE.

Consul R. P. Pooley, of St. Helena, sends the following report on the trade of that celebrated island. He says:

The total value of the foreign trade for 1905 amounted to \$302,110, divided as follows: Imports, \$263,935; exports, \$38,175. Of the imports, Great Britain furnished \$231,415; Australia, \$21,410; South Africa, \$5,740; East Indies, \$4,740, and the United States, \$630. The exports to Great Britain amounted to \$2,850 and to South Africa \$35,175. The principal articles of import were grain, beer, butter and margarin, oilmen's stores, boots and shoes, sugar, and provisions. The exports consisted of hides and skins and wool.

A very considerable deposit of manganese ore has been discovered embedded in the hills near "Turks Gap." A concession has been granted a South African company, which will exploit and develop the mines.

REUNION ISLAND.

FRANCE HAS BULK OF TRADE.

Consul William H. Hunt, of Tamatave, supplies a summary of the trade returns of the island of Reunion, near Madagascar, during the year 1905.

The total value of the foreign trade for the year reached \$5,382,841, a decline of \$964,650 from the previous year. The imports are given as \$3,509,671, a decrease of \$216,362. The value of the colony's exports is reported as \$1,873,169, which shows also a decline of \$748,288. France contributed \$2,094,839 of imports, and French produce to the value of \$813,696 was exported to that country, which is about 72 per cent of the total trade of the island. Reunion's trade with other French possessions reached \$414,849, of which \$320,376 were imports and \$94,473 were exports—about 20 per cent of the total trade. As regards the commerce of Reunion with other countries, the figures are given as \$1,287,977, of which \$1,094,456 were imports and \$193,521 were exports.

SOUTH AMERICA.

REPUBLIC OF ECUADOR.

CONCESSIONS BY THE GOVERNMENT.

LIBERAL INDUCEMENTS OFFERED FOR DEVELOPMENT OF THE COUNTRY.

Mr. Joseph W. J. Lee, minister at Quito, supplies a résumé of a decree issued by the Government of Ecuador for the purpose of fostering industries, manufactures, agriculture, pisciculture, and other similar enterprises in the Republic. He states that this decree is looked upon by the people as a very important measure, and it is hoped that favorable results will follow. It reads:

ARTICLE 1. To concede the free use of the streams, waterfalls, and all natural waterways to all who may start in the country new manufactories employing hydraulic or electric force. This concession not to interfere with existing rights nor with the right to draw off water for irrigation purposes.

ART. 2. To grant to all such establishments concessions of vacant Government lands up to 25 hectares of land with at least 200 meters frontage on the water supply used by the enterprise. If the factory be started upon private lands these can be expropriated legally by paying the value of such land as may be acquired, according to the valuation of two appraisers.

ART. 3. To grant 200 hectares of land to all who agree to start the cultivation of sisal hemp, ramie, flax, maguey, or other plants which produce material for textile fabrics.

ART. 4. Those who dedicate themselves to the cultivation of cereals or vines will have the concession of 50 hectares of land.

ART. 5. Those who engage in the raising of swine shall have permission to import animals for breeding purposes free of fiscal or municipal dues for the space of ten years.

ART. 6. All permanent lakes in the provinces of the interior which are more than 100 meters in extent shall be considered as national property, and their use shall be conceded for the term of ten years to those who devote themselves to pisciculture. The lakes of Yaguarocha and San Pablo, which are already stocked with fish, are excepted from this concession. After the expiration of ten years, fishing in the lakes will be open to the public. It shall be prohibited to draw off water for irrigation, etc., from such lakes.

ART. 7. Admits free importation of seeds and plants for ten years; but should such seeds and plants be offered for consumption otherwise than for planting they shall be considered contraband.

ART. 8. Exemption from military service of owners and employees of such factories, except as regards Ecuadorian citizens in case of foreign war.

ART. 9. From January 1, 1907, and for ten years thereafter, import dues and surcharges on manufactured articles imported into the country shall not be reduced in any case where similar goods are already manufactured in the country.

ART. 10. The same condition as in article 9 applies to any new industry which may be established hereafter from the date of its beginning and for ten years thereafter.

ART. 11. Refers to the same question of import dues.

ARTS. 12 and 13. Provide that duties on raw material required for manufactures shall not be raised or altered for a period of ten years.

ART. 14. Provides that goods manufactured in Ecuador can not be taxed to an extent more than 50 per cent of the total import duties charged on similar foreign goods, and that goods produced from raw material grown in Ecuador shall not be

liable to any tax or impost whatever for ten years from January 1, 1907, except in the case of sugar cane and tobacco products.

ART. 15. Provides that all people who have obtained concessions of Government lands on the pretext of establishing industrial factories, and who do not fulfill their project within two years from the date of the grant shall lose their concession.

BRAZIL.

OFFICE FITTINGS NEEDED.

OPPORTUNITY PRESENTED FOR AMERICAN MANUFACTURERS.

Consul-General G. E. Anderson, of Rio Janeiro, thinks that there is an opportunity for American manufacturers of office fittings to secure a foothold in Brazil.

There is a wave of improvement on in Brazil generally and especially in Rio de Janeiro. A large number of modern office buildings are being constructed, creating a demand for new office appliances, which will be mostly made in Brazil, but an aggressive campaign in behalf of American roll-top desks and similar conveniences would probably be successful. Manufacturers of patent files, especially metal files, and other office appliances should do a good business. The tariff is high. On an office desk, for instance, the duty would be \$6 to \$40 gold, depending upon the nature of the article. However, high prices are common on everything. The business men of Rio de Janeiro will buy American office fittings when once they are led to appreciate their merits, high prices or not. In a community where business affairs are dominated largely by conservative foreigners, however, the introduction of modern American conveniences will not be accomplished without effort. [American manufacturers desiring to enter the market in such goods should write to some of the firms named by Mr. Anderson, the addresses of which are obtainable from the Bureau of Manufactures.] Correspondence should be in Portuguese, if possible, otherwise in French, and in English only as a last resort.

CHEMICAL PRODUCTS IN BRAZIL.

Consul-General Anderson also writes that the United States seems to be sending practically nothing to Brazil in the way of chemical products of any sort, in spite of the fact that Brazil has been importing about \$4,000,000 worth of such goods annually for some time. Germany, France, and Great Britain have had the bulk of this trade, each having a little over a fourth of the total, the last fourth being divided between the United States, Italy, Portugal, and other countries. The total imports from the United States last year were about \$350,000, including the imports of capsules, in which trade the United States has the lead.

The chemicals required in Brazil at the present time are those common to most countries, especially countries having more or less territory in the Tropics. There is a strong and growing demand for disinfectants of all sorts, and for all those classes of goods which make for cleanliness. I know of no sound reason, also, why American medi-

cines in tablet form should not be sold here more generally than they are. The American goods of this sort stand well generally, and inasmuch as they are being placed elsewhere in competition with European goods there is apparently no reason why they should not also be placed here.

Of course in this, as in other lines, direct representation would be preferable to any efforts to secure business by correspondence, and a firm having a considerable line of such goods could probably make a trip of a special representative pay at once.

COLOMBIA.

TRAFFIC IN RICE.

GERMANS SUPPLYING THE SOUTH AMERICAN MARKETS.

Data on the rice trade of Colombia is furnished by Consul P. P. Demers, of Barranquilla, who writes:

The consumption of rice in this country is very large. The cereal is universally used and served twice a day at the tables of the rich, the middle class, and especially the poor. In the interior of Columbia rice is cultivated in sufficient quantities to supply the home market, but the departments of the coast do not grow any and the demands are met by importation. The import of rice through this port for local consumption amounted in 1903 to 5,254,620 pounds, in 1904 to 6,199,124 pounds, and in 1905 to 12,604,754 pounds. Of this amount Germany supplies over 90 per cent, while the United States supplied less than 2 per cent in 1903 and less than 3 per cent in 1904, the exact amount being from the latter country 97,101 and 150,865 pounds, respectively. The figures for 1905 show a further slight increase. The duties on imported rice are 1.7 cents per kilogram (2.2 pounds) and it is retailed at 3.8 cents per pound.

It will be hard to bring American products here in competition with the Germans, for not only can they buy rice in India and China and bring it to Hamburg cheaper or as cheap as we can produce it at home, but, hard to believe, they can also transport it to South America from Hamburg cheaper than Americans can from New York, although the distance from the former port is more than twice that from the latter. German, English, French and Italian lines ply regularly between Europe and this country, whereas one branch only of the Hamburg American Line formerly furnished the transportation from New York. Conditions may improve, everything depending upon cheap and convenient transportation. The Royal Mail Steam Packet Company, touching South American ports, have for some time extended their schedule to New York, and a competition between the two lines has already started with resultant reduction of transportation charges. This is bound to have a healthy effect on American trade in South America. [The principal importers of rice and rice flour in Barranquilla are named by the consul, and the addresses will be furnished to applicants by the Bureau of Manufactures.]

REGULATIONS FOR ADMISSION OF FOREIGNERS.

Consul Demers also reports that the Government of Colombia has promulgated a decree with respect to the entry of immigrants and foreigners generally into that country. It is provided:

1. All foreigners arriving at Colombian ports and wishing to enter the country shall carry with them a passport in due form, viséed by the Colombian minister or consul at the port of embarkation.

2. Whenever a traveler shall appear to be suspicious for the public security he shall not be allowed to disembark, but will be deported by the same steamer on which he came.

3. The entry into the country of persons which, in the judgment of the sanitary doctor of the respective ports, suffer from contagious diseases is prohibited.

4. A register shall be opened showing the movement of passengers, their entry and departures, full names, foreign port of embarkation, place of destination, nationality, profession, sex, age, etc.

ARGENTINA.

PROGRESS IN THE REPUBLIC.

Reports from Buenos Aires indicate continued progress in Argentina. The Government is figuring on early development of the Bahia Blanca commercial port. The plans comprise a large dock, 4,000 meters of mole, elevators, etc., at a cost of \$10,000,000 gold.

The cultivation of cotton and other textiles in Argentina is to be assisted. The government of Cordova Province has presented to its legislature a law exonerating for fifteen years from all tax an agricultural industrial establishment founded near Jesus Maria by the Argentine Textile Association.

The first half of 1906 marked the high watermark in the tide of immigration to Argentina—90,000 immigrants having landed in that country up to June 30—and the expectation is that the total for the year will exceed 200,000. The several years of abundant harvests form an attraction that is drawing European laborers to the country.

URUGUAY.

INTERNATIONAL HYGIENIC EXPOSITION.

The chargé d'affaires of Uruguay at Washington has written to the Department of Commerce and Labor calling attention to an International Hygienic Exposition to be held in Montevideo, commencing January 13, 1907. The objects to be exhibited at this exposition include all models, foods, drinks, industrial, chemical, and pharmaceutical preparations, and medical and surgical apparatus relating to hygiene and found in commerce. Exhibitors will have an opportunity to give to the public information concerning their products. The Government of Uruguay desires that manufacturers of these products place them on exhibit. Prospective exhibitors should address "Comite Organizador de la Exposicion, Palacio del Ateneo, Montevideo, Uruguay, S. A."

CENTRAL AMERICA.

PANAMA.

LARGE IMPORTS FROM AMERICA.

THE GENERAL CONDITIONS OF TRADE AND COMMERCE.

Consul James C. Kellogg, writing from Bocas del Toro, furnishes the following report on commercial conditions in Panama:

The value of the imports during the year 1905 amounted to \$770,873, of which about \$460,000 was imported from the United States, \$120,000 from European ports, and the remainder principally from Colon. The chief articles from the United States were gasoline, provisions, hardware, kerosene, lumber, bricks, furniture, shoes, hats, and cotton goods, carried by Norwegian steamers.

The exports consisted of bananas, \$1,407,459; cocoanuts, \$3,748; turtle-shell, \$10,362; turtle conserves, \$3,415; sarsaparilla, \$4,167; rubber, \$4,112, and hides, \$2,575, or a total of \$1,435,838. The bananas, cocoanuts, and turtle conserves went to the United States, while the turtle-shell, rubber, sarsaparilla, and hides were shipped to Europe, owing to better prices. The bulk of these articles went to Germany and England and were shipped in German steamers.

The total number of steamers entering the port of Bocas del Toro during 1905 were 185, of which 129 were Norwegian, 33 German, and 23 British. Not a single American vessel entered the port.

AGRICULTURAL AND INDUSTRIAL.

The total output of cocoanuts in this district can not be given, as no data are obtainable. The price fluctuates considerably, at times costing as high as \$16.50 per thousand, while at other times they can be bought at \$13.50 per thousand. There is an opening for an investor who would manufacture cocoanut oil and dried cocoanut, or copra. In very few cases are these nuts cultivated.

There are large quantities of oranges, pineapples, wild vanilla, and sugar cane growing in this district, but none cultivated to any extent. With proper handling and attention these articles would prove a profitable source of income. Sugar cane grows very readily and, with a reasonable expenditure of capital to start with, could be made a well-paying investment, as quite a large amount of beet sugar is imported here.

Located at Careening Cay, an island distant about a quarter of a mile from the town of Bocas del Toro, is a ship-building yard owned and operated by Americans, who also own a machine shop for the repairing of gasoline launches, etc. This yard recently turned out a twin-screw, 100-horsepower, gasoline boat. The dimensions of this boat are as follows: Length over all, 90 feet; keel, 86 feet; beam, 19 feet; capacity, 80 tons, and is run by 2 Wolverine gasoline motors. She is provided with 12 berths, a large cabin, and plenty of deck space, and will run weekly between Colon and Bocas del Toro.

HONDURAS.

OPPORTUNITIES PRESENTED.

YELLOW FEVER STAMPED OUT—TRADE OPENINGS.

According to a report from Consul F. S. S. Johnson, of Puerto Cortes, it is the general opinion of merchants of Honduras that a larger trade could be had with the United States in all food products, wearing apparel, etc. He writes:

Honduras has almost no factories and buys her manufactured supplies abroad. The transportation lines find enough goods to carry to Puerto Cortes, but the trouble lies in not having any return cargo. If the resources of Honduras were carefully studied by Americans, they would have no trouble in taking ships back to the United States with full cargoes. It is stated that in a few years the forests of the United States and Canada will no longer be able to supply the wood pulp for the manufacture of paper. In Honduras there are waiting for exportation millions of cords of wood available for this purpose, which could now probably be purchased for a small sum, as only hard woods have any market abroad. After clearing the land of timber it could be planted in bananas.

Having read in one of the consular reports that a way had been found by which the leaves of bananas could be manufactured into paper and that a factory would be established for this purpose in Mexico, would it not be a cheaper and better plan for Americans to start a factory of this kind in a banana-producing country, for instance at Puerto Cortes, where the exportation of this fruit amounts to over a million dollars a year, and where no use has been found for the leaves after the removal of the banana from the tree? The fertile Sula valley holds out great inducements in the cultivation of yuca (cassava), from which starch is made. An American company has already applied to the Government of Honduras for the exclusive right to manufacture starch from the yuca for the period of ten years. This firm will have a large factory at Puerto Cortes and raise the yuca for their own use.

CONCESSION AND COMMERCIAL POSSIBILITIES.

The town of Puerto Cortes is built on a narrow strip of land along the water edge, some of the houses being built on piles in the bay. If the swamp back of the town were filled, which could be easily accomplished by means of a suction pump, Puerto Cortes would be one of the most important ports in Central America. I believe that an American company could secure a reclamation concession from the Government by agreeing to give the Government a certain acreage after being filled in. The concession granted an American company for the building of a wharf will shortly expire. The present wharf is so small that only one ship can load at a time. A much larger wharf is needed, as one to two steamers are loading each day with fruit for the United States. The logs and other material used in the building of wharves can be had at this place, as well as a pile driver. People have feared to come to Honduras because of yellow fever, an epidemic

of which we had last year with a few cases this year at the towns of Choloma and Pimienta. At present there is no yellow fever in Honduras; it is a disease that was brought to this country, and, with the strict measures now enforced, it will be a good many years before this dreaded disease again visits Honduras. While the trade of this country is controlled by Americans the vessels employed to carry our goods to and from the United States are Norwegian. In the fiscal year just ended only one American vessel called at this port.

Considerable interchange traffic is carried on in Honduras. One man may have crude rubber which he exchanges for cotton goods. Tobacco, cigars, and beans are obtained in this way by small boats trading along the coast. San Pedro is an important town, with 5,000 population, in the center of banana culture in the Sulu Valley. It has a large trade with the interior, carried on by pack mules. San Pedro has up-to-date stores and warehouses, which fact should not be overlooked by commercial travelers. It is surprising how many small stores there are in Honduras, and their proprietors would like to deal direct with American exporters. This part of Honduras is prosperous, owing to the large banana crops sold at fair prices in the United States. Many thousand additional acres are now being cleared and will be planted by American capital. Rubber, sarsaparilla, hides, and deer-skins are consigned for sale in the United States.

NICARAGUA.

AN IMPORTANT CONTRACT.

A VALUABLE CONTRIBUTION TO COMMERCE.

Arthur O. Wallace, writing from Managua, Nicaragua, says that the Nicaraguan Government has just contracted with one José D. Gomez, representing the Central American Growers' and Transportation Company of Baltimore, said company to dredge the entrance of Pearl lagoon to a depth of 16 feet, to keep same always open unless prevented by accident, forces of nature, etc., work to begin at once and to be completed in two years from date of digging first shovel full of dirt.

By article 2 of the contract the company binds itself to build a wharf for a custom-house within eight months after signing the contract. Pearl lagoon is to be declared an open port. It is also agreed that the company may collect fees for wharfage and storage.

The various articles of the contract determine the duties of the company, its relations to the Government, the public, and the commerce that enters the country by way of Pearl lagoon. Among these the most important is article 15, which gives the company the right to collect 5 cents gold on each bunch of bananas exported at the port of Pearl lagoon, going so far as to give the company the right to detain a ship until the tax has been paid.

The contract is to run for thirty years, after which date all rights, fixed property, such as docks, wharves, etc., revert to the Nicaraguan Government. Ships, railroads, telegraph and telephones owned by the company shall be sold to the Government 20 per cent below the value appraised by experts appointed by both parties.

Inasmuch as this contract when fulfilled will lead to the opening up of vast areas to agriculture, and will facilitate transportation to and from the rich mining and timber lands of the country, it can not fail to find interest, financially and commercially, among the financiers, merchants, and manufacturers of the United States. By its completion the banana business, now in the hands of a monopoly, will be free to take advantage of any competition offered, and made possible, by Pearl lagoon as an open port and as a place in which to meet parties interested in Nicaraguan products, particularly bananas and the rich woods with which the forests of the Republic abound.

WEST INDIES.

ISLAND OF PORTO RICO.

GREAT INCREASE IN FOREIGN PURCHASES LAST YEAR.

The imports of Porto Rico in 1905, according to the British consul at San Juan, had an increased value of \$5,530,000 over those of the previous year, which is accounted for by the larger supplies of breadstuffs, provisions, railway rolling stock, cement, chemicals, cottons, fish, glassware, etc., but principally of iron, steel, and machinery for the new sugar centrals now in course of construction or for the reequipping of the old ones, amounting in value to \$1,805,000 in excess of last year's supplies in the same direction. Exports continue to improve and show an advance of \$4,224,000, caused principally by the increased sugar and tobacco production. The following statement shows the total values of imports and exports for the last two years:

	1904.	1905.
Imports:		
From United States.....	\$11,154,000	\$16,410,000
From other countries.....	2,043,000	2,350,000
Total.....	13,197,000	18,760,000
Per cent from United States.....	84.8	87.5
Domestic exports:		
To United States.....	12,828,000	17,461,000
To other countries.....	3,835,000	3,426,000
Total.....	16,663,000	20,887,000
Per cent to United States.....	77.0	83.6

The values of merchandise imported into Porto Rico from the United States during the calendar year 1905 were as follows:

Articles.	Values.	Articles.	Values.
Iron and steel, machinery, etc.....	\$2,935,000	Sugar and confectionery.....	\$217,000
Rice.....	2,745,000	Oils.....	214,000
Cotton.....	2,500,000	Chemicals, drugs, etc.....	212,000
Provisions and dairy products.....	1,689,000	Carriages and parts.....	211,000
Breadstuffs.....	1,328,000	Soap.....	207,000
Wood and manufactures.....	658,000	Coal and coke.....	176,000
Fish (cured).....	605,000	Paper and manufactures.....	171,000
Leather.....	408,000	Wool.....	144,000
Tobacco and manufactures.....	284,000	All other articles.....	1,737,000
Vegetables.....	265,000		
Fibers and manufactures.....	248,000		
Fertilizers.....	245,000	Total.....	17,199,000

Porto Rico is advancing in sugar production, the export of which, including molasses, was valued at \$13,433,000, an advance on 1904 of \$3,617,000. The citrus tree acreage has been extended to 7,000 acres. Tobacco to the value of \$3,210,000 was exported in 1905, over two-thirds of which was manufactured. Coffee, before the hurricane, was the principal product of the island, and in 1896 produced a crop of 60,000,000 pounds, worth \$7,944,000. The exports in 1905 were \$2,000,000. Canning factories are being erected. The American Railway of Porto Rico now has 172½ miles of track open.

HAITI.

WHERE COUNTRY BUYS.

AMERICAN LEADERSHIP IN THE IMPORT TRADE.

The trade of Haiti with the United States during the fiscal year 1905, according to the International Bureau of the American Republics was as follows: Imports from America, \$2,297,080; exports \$1,101,650.

More than two-thirds in value of Haiti's importations come from the United States. The bulk of the remaining importations conforms to tastes acquired in Europe by natives educated there and fostered by foreign merchants resident in Haiti, most of them Europeans. With regard to exports the conditions are quite the reverse, the great bulk of native products going to Europe, a considerable portion of logwood and a small quantity of other woods, goatskins, etc., going to the United States. The rest of the logwood and practically all the coffee and cacao go to Europe. The National Bank of Haiti states that for the year ended September 30, 1905, the exports of coffee were 45,244,232 pounds; cacao, 4,924,383 pounds; logwood, 112,050,758 pounds, and cotton, 3,287,669 pounds.

Trade in textiles from the United States within four years has increased 50 per cent; one large house that deals exclusively in these goods states that it approaches nearly 75 per cent. Before this period only the coarser lines of textiles were bought in the United States, and the finer from England, but for some time past all the finer qualities of this class of goods, except shirtings, have been bought in the United States.

POPULAR EUROPEAN ARTICLES.

In hardware England has a slight advantage, but the American trade in this direction is increasing annually. One of the principal articles in this line is zinc roofing. Nearly all the houses are covered with it. England has at present the command, for the reason, it is stated, that it is better than the American article. English calicoes also have a better reputation than those from the United States.

France still commands the Haitian market for jewelry, bric-a-brac, perfumery, and articles of like nature, as Germany does for the ordinary or rougher class of pottery. The provision trade, which was exclusively in the hands of United States dealers, has suffered a decline. This arises not from any competition from other markets, but is due to the great stringency that has existed in the Republic for the last three years.

Haiti needs agricultural machinery, dry goods, and other domestic utilities, most of which, it is stated, are now procured from Europe.

NORTH AMERICA.

MEXICO.

WHAT THE GOLD STANDARD HAS DONE.

REPUBLIC HAS HIGH WAVE OF PROSPERITY UNDER NEW STANDARD.

Mexico's first year on a gold basis, which was completed May 1, has been, according to an article by Edward M. Conley, formerly vice-consul general in Mexico City, the most prosperous in the history of that country.

He states that investments of foreign capital, which had practically stopped for two years prior to the change in anticipation of it, were at once resumed on a larger scale than before, and native capital which had also been held back was quickly released. At least \$150,000,000 of foreign capital was invested in enterprises in Mexico during her first year as a gold standard country, about one-half of it American, the rest largely French and Canadian. Most of the new American capital was invested in railroad construction, mining equipment, plantations, city real estate, and mercantile establishments. The total investments of American citizens in Mexico now aggregate \$600,000,000.

Mexico has begun her second year of the gold basis under particularly auspicious circumstances. Finance Minister Limantour has budgeted \$1,000,000 additional Federal revenue for the current fiscal year. The annual \$40,000,000 silver production is expected to show a substantial increase, while the production of copper, amounting to over \$12,000,000 annually, promises this year to reach the \$15,000,000 mark. Its high price is in Mexico's favor.

RENEWED CONFIDENCE IN LIFE INSURANCE.

According to a report from Consul-General Philip C. Hanna, of Monterey, it appears to be the prevailing opinion among the class of Mexican people who are interested in life insurance that insurance with American companies will from now on be more desirable than ever before. It is believed that late investigations resulting in eliminating extravagance and questionable methods, with the adoption of economy in conducting the business of several companies, will tend to increase confidence and make policies of American insurance companies more valuable than heretofore. It is believed that such companies as are able to convince people of honest businesslike methods will find an improved field in Mexico for business.

CANADA.

GOLD SHIPS IN THE NORTH.

INTENSIVE MINING METHODS IN KLONDIKE AND ALASKA.

According to Consul G. B. Ravndal, of Dawson, a gold-dredging epoch is dawning upon the Klondike.

The rich, early discovered creeks have already by crude and wasteful methods been worked over. They are now being subjected to another, more scientific, treatment. A prominent feature of the new system is gold dredging. It has proved eminently successful in the Klondike in spite of such drawbacks as difficulties of transportation, high costs of installation and operation, frozen gravels, and short seasons. Gold dredging in the north has passed the experimental stage and become an established and promising industry. Extensive areas of low-grade ground which have been lying idle, because under the former manner of mining the cost of extraction would equal, if not exceed, the returns, are being made productive through the use of dredges handling 3,000 or more cubic yards of dirt every twenty-four hours.

There are now in the Klondike, either in operation or in course of installation, nearly a dozen gold dredges. Next season will witness the arrival of several additions to the northern mining fleet, some of which will be put to work in the Fortymile and Birch Creek districts of Alaska. All of these "gold ships" are of American make. Occasionally it is said that dredges from other countries may enter into competition with American patterns. Such reports are probably idle and merely the result of impatience because American manufacturers can not at present fill all orders promptly. Calls for gold dredges come from California, Montana, Idaho, and Colorado. Gold dredging is to be tried in Siberia and in the valleys of the Yalu, the Amur, the Hoangho, and the Yangtze. The present inability of American dredge manufacturers to supply the demand is perhaps chiefly due to Panama Canal requirements. In the Canadian Parliament Dr. Alfred Thompson, representing Yukon Territory, said:

While on this question of bringing in quartz mills duty free, I might refer to another industry which has just been started in Yukon territory—that is the dredging industry. Dredges are also made in Canada, but as a Canadian it humiliates me to have to admit that better gold dredges for the Yukon are made in the United States, for some unaccountable reason, whether because they have a large market or not. In the Yukon we are just on the eve of a great dredging era, and I submit for the consideration of the government that they should remit for a term of years the duty upon mills and dredges made in the United States, which are more suitable for work on the Yukon than those made in Canada. If the government would do this, it would give a great impetus to the quartz mining and gold dredging industries of the Yukon.

DREDGES FREE OF DUTY—GOLD PRODUCTION.

As a matter of fact "machinery and appliances of a kind not made in Canada, for use exclusively in alluvial gold mining," are admitted free of duty into Canada and will be until at least one year from now. Under this provision most of the component parts of a modern gold dredge may enter Yukon territory without paying customs duty.

Having passed through the first and primitive stage of gold mining (washing out gold by the use of pans, rockers, cradles, long toms, sluices, grizzlies, etc.), the Klondike is now entering upon the second stage of placer mining development, employing hydraulic and dredging machinery. Later on will probably follow the third and still more permanent method of harvesting the yellow metal, i. e., quartz mining.

It is expected that the introduction of dredges will greatly increase the output of gold in the Klondike. In 1905 this was reduced to about \$7,500,000, as against \$10,350,000 in 1904, \$18,000,000 in 1901, and \$22,275,000 in 1900. Speculations are already rife as to whether this enlarged supply from the Yukon, coupled with Alaska's growing yield of new gold, will not perceptibly affect the general economic conditions in America as a whole. During 1906 Alaska will probably furnish some \$20,000,000 of gold, as against \$14,500,000 for 1905, \$9,000,000 for 1904, and \$6,350,000 for 1903. It is pointed out that seasons of exceptional prosperity have followed each of the great gold finds of recent times—those of Australia, of California, of South Africa, and of the Klondike. So far most of the capital invested in dredging operations in the Klondike is owned by citizens of the United States and most of the gold cleaned up is sold in Seattle.

BRITISH COLUMBIA PROSPEROUS.

Consular Agent J. R. Pollock writes from Fernie, British Columbia, that 1905 was a year of industrial progress and prosperity in his district. The mines employed a great many men; the sawmills ran full time and up to the limit of their capacity. Sections round about in the Province of Alberta and eastern British Columbia are filling up with new, energetic, progressive, and enterprising settlers. The great need now is laborers enough for the work on hand. New railroads are being built opening up vast resources in mines, in the forests, and in farms. Coal, silver, and other minerals are being found in quantities that promise rich reward to the owners and exploiters of the mines.

ANXIOUS FOR MILKING MACHINE.

Consul H. D. Van Sant reports from Kingston that "the great need for the Canadian dairy industry is an improved milking machine" is one of the decided opinions of President Creelman of the Ontario Agricultural College. The dairy industry is increasing in importance in Ontario, and the exportations increased last year to over \$30,000,000. Seventy per cent of the cheese on the English market is Canadian. Owing to the removal of many of the best Ontario farmers to the Northwest and the advent of inexperienced immigrants, farm labor is scarce and unsuitable. There would be a splendid field for an improved American milking machine in Canada.

SOIL PRODUCTIONS.

FIBERS, FOODS, AND RUBBER.

NEW LINEN PLANT.

IMMENSE PROFITS CLAIMED FOR GROWING IT IN TROPICS.

According to Consul-General George E. Anderson, at Rio de Janeiro, the linen industry of the world may possibly be revolutionized by the discovery and development of a linen plant indigenous to Brazil and some of the great fertile plains of South America.

The new plant is known as "*Canhamo braziliensis perini*" or "Brazilian linen." It is named for its discoverer, Dr. Victorio Antonio de Perini, and its practical development is now being effected upon several experimental plantations, the most notable of which is at Boa Vista, in the State of Rio de Janeiro. The development was commenced with the assistance of the State government and has continued to a point where it may be stated without question that the fiber is a success and that its influence will be felt at once in the fabric world. The product of the plantations now established has been contracted for by British interests at a very profitable rate. One of the plantations established includes an area of 500,000 square meters of the growing plants at Rodeiro, and the one at Boa Vista will soon have over 2,000,000 square meters.

The *Canhamo braziliensis perini* is virtually a weed growing from 12 to 18 feet high in four or five months, resembling in general appearance the hemp. The special advantages of this Brazilian fiber over European linen and other similar plants claimed by those interested in its cultivation are:

(1) It is absolutely hardy, resisting alike the dry or the rainy season, bearing equally well in dry or wet soil, and not a prey to insects or mildew.

(2) No care or special cultivation is required after planting.

(3) The plant matures so rapidly that a crop can be gathered three months after sowing—that is, three crops a year can be had.

(4) Its general nature is such and the qualities above enumerated are such that it can be grown upon what are now vast tracts of practically waste land, with comparatively little outlay of capital.

(5) The fiber has all the necessary qualities required for high-class use, viz, strength, fineness, flexibility, and adaptability for bleaching or dyeing.

(6) Every portion of the plant can be used for some industrial purpose.

A LONG, STRONG FIBER—CULTIVATION METHODS.

The discoverer and the Brazilian interests claim that they can produce a fiber equal to the best European linen, and that this plant can be grown under such conditions that the production of this fiber will

be cheaper and greater than possible with the European product. The results of the initial work demonstrate vast possibilities in the plant which have not yet been developed. The samples of fiber transmitted [portions of which will be loaned by the Bureau of Manufactures on application from American textile manufacturers] have been taken from a plant growing wild. The cultivated product shows a finer fiber with strands of greater length, being much longer than European linen or hemp. In fact, it is so long that it must be cut before being used for weaving purposes. As to its strength, the following results of repeated and careful experiments had with threads of equal thickness will prove interesting: Linen broke when the weight attached reached 7 kilos (kilo 2.2 pounds); European hemp broke when the weight attached reached 10 kilos; Canhamo Braziliensis fibre A broke when weight attached reached 9 kilos; fiber B broke at 10 kilos, and fiber C broke at 12 kilos.

The growers of the plant claim that every particle of it can be used for valuable purposes. The fiber runs generally into three grades, the finest of which corresponds to the best linen, the second to coarse linen, and the third to European hemp. From the fiber of the plant, therefore, comes both fine linen and strong rope. The residue of the plant is composed of high-grade cellulose, said to be especially suitable for the manufacture of fine writing paper, the whiteness and clearness of the stem of the plant simplifying the process of manufacture. The fiber is adapted to dyeing and bleaching. The dyed samples have a luster and silky appearance.

The present cultivation of the Canhamo Braziliensis Perini is largely experimental, but the best time for planting is found to be in November in this latitude, corresponding to May in the Northern Hemisphere, although planting can be done at any time of the year in this tropical climate. The ground is prepared in September (March) to October (April) in two divisions, a comparatively small space for growing seed and the rest for industrial purposes. The seed-crop ground should be prepared earlier, if possible, and it is sown with 25 seeds to the square meter (39.37 inches), thus giving the plant more room to grow than is allowed for fiber, which needs 100 seeds to the square meter, this number of seeds generally weighing about two grams. Thus closely planted the stalks grow with but one stem, not having space to branch out. The fiber thus produced is finer and more silky.

HARVESTING RESULTS.

The plants grown for fiber should be cut before flowering, in the experimental grounds here requiring about three months to attain the proper growth of 3 meters, or about 10 feet. The staple is quite long compared with the 40 to 50 millimeters of flax and 1.30 to 1.50 meters of hemp. The plants are cut about 4 inches above the ground. They will immediately send out shoots which can be cut in the same manner, again forcing a new growth. In this manner there will be a harvest, from plants sown in November, in February, June, and October, corresponding to August, December, and April in the northern hemisphere. After the last harvest it is necessary to dig up the roots and prepare the land for a new sowing. Where the plants are grown for seed a four months' growth is required, which is cut, and the stalks brought to a second flowering, which is allowed to dry on the plants.

The fiber is coarser than that grown for fiber alone. It has been found necessary to keep the growing crop clean of weeds. The amount of fiber produced varies with the several crops. The results of the practical experiments of the "fazendas" are as follows:

First crop (on 100 square meters).

	Pounds.
Clean fiber, unprepared in any way	440
Coarser fiber, unprepared in any way	350
Refuse from the mascerating tanks	400
Fibrous root and waste	155
Stems (for paper)	1,320

This was a seed crop, and to the above must be added 310 pounds of clean seed and 640 pounds of seed with the shell on.

Second crop.

	Pounds.
Clean fiber	270
Coarser	1,780
Fibrous roots	1,780

The average of the third crop is about one-half of the second crop. The annual production of 100 square meters planted with *Canhamo braziliensis*, therefore, is probably about 845 pounds of fine fiber, 3,020 pounds of coarser fiber, with something like 5,000 pounds of fibrous roots and waste suitable for paper manufacture. Multiplying these figures by 40 will give the annual production per acre, assuming that the production can be maintained in larger fields. An acre would thus produce 154,600 pounds of fiber of two grades—about 77 tons—for which, for the present at least, the promoters have a contract to dispose of all at £40 or \$200 gold per ton. This earning of \$15,400 an acre is based upon a local price of about 15 cents gold per pound for the first-grade and 7 cents gold per pound for the second-grade fiber. It is a little difficult to believe these figures, but the experiments so far seem to speak for themselves.

FINE PAPER FROM WASTE—AMERICAN PATENTS.

The demand for the waste material of this plant for paper making will be steady. At present all but coarse wrapping paper is imported and the imports will exceed \$3,300,000 annually. White paper is not made in Brazil, owing to a lack of suitable material. So far most of the planting of the *Canhamo braziliensis perini* has been for seed, the promoters extending their plantings as rapidly as ground could be secured, cleared, and seed produced for the planting. Machinery for the treatment of the plant for the extraction of the fiber has been imported from Europe, the plows, reapers, and similar machinery and pumps and hydraulic machinery coming from England, while the crushing, combing, and other machinery comes from Belfast, although constructed on Belgian models. Present plans contemplate only the production of the raw fiber for export, although the ultimate result may be a great manufacturing enterprise when labor and commercial conditions in Brazil will justify the venture.

The production of fiber from the *Canhamo braziliensis perini* has just been patented in the United States. Whether the plant can be grown to advantage in the southern portion and Pacific coast regions

of America free from frost is not known. The matter merits the investigation of the agricultural and industrial authorities.

Whether or not the expectations are realized, this plant is reasonably certain to have an important influence upon the textile world. Experiments to acclimatize flax and hemp in South America and Australia have uniformly failed, the efforts of several European authorities in Argentina, Chile, Venezuela, and Uruguay having no advantageous results, while those of the Irish Association of Belfast in Australia seem to have produced no effective results. The cultivation of flax in North America generally seems to have been almost abandoned as unprofitable, and in spite of heroic efforts to maintain the linen producing industry in India the acreage was reduced several years ago to about 34,000 acres. It seems reasonable, therefore, to concede the claims of the Brazilian authorities that none but an indigenous plant which can be produced at a minimum cost in labor, soil, climate, and conditions of manufacture will be a success on American soil. They claim that they now have such a plant, and are pinning their faith to it and investing money in its development.

[NOTE.—The consul-general is in error in assuming that the cultivation of flax in North America has been "almost abandoned as unprofitable." There were 2,534,830 acres under cultivation in the United States in 1905, an increase of 271,271 acres over the previous year. The farm value of the crop on December 1 was \$24,044,072. It is cultivated chiefly for the seed.]

MALVA FIBER.

NEW MEXICAN PLANT AVAILABLE FOR AMERICA.

Consul Louis Kaiser, of Mazatlan, responds to an American request for information regarding a new fiber plant, called "malva," concerning which he writes:

Malva castillo grows wild in all parts of the Mexican State of Sinaloa and is an abundant weed, growing from 3 to 5 feet high. It grows only during the rainy season, which is from July to the first part of October, and during November and later the plant becomes dry and resembles a stick of wood. By soaking the sticks in water and beating them the covering is easily removed from the fiber, which is spread out to dry, and is then ready for use. The weed will grow during the entire year if irrigation is used, which causes it to grow much more prolific and higher; in consequence the fiber becomes more valuable.

This fiber has only lately come into use, as other fiber plants give a more abundant yield, but there is no doubt that the malva plant will be cultivated and become an important source of revenue for Mexico. This plant will also grow in all of the southern United States in which cotton is grown, and can be very easily raised from seed. Malva has not yet been used commercially, and it can not now be safely predicted that it will be a paying industry. However, the production of fiber plants is becoming one of importance on the coast, and with further continuous experiments being made the future value of malva as a fiber producer will no doubt be proven.

RAMIE CULTIVATION.**EXPERIMENTS WITH THE PLANT IN INDIA—WORK OF A SYNDICATE.**

The French Journal of Tropical Agriculture recently published a long article on ramie, in which it tells of the experience of the Bengal syndicate that began experiments in 1900 for the production of ramie by making contracts with local plantations representing an area of 3,700 acres.

At first it was difficult to obtain the requisite plants for making plantations. It was found necessary to make a nursery on each farm to multiply the rhizomes. The plantations suffered much from termites which rapidly destroy the young roots, especially of the cuttings. Planting the latter during the rainy season is, however, a partial remedy, but the best method of multiplication is by division of the stalks. Portions of rhizomes can be taken from the plants one or two years old without detriment to the plantations. Only light, permeable soils give good results, neither nitrous soil nor alkaline land being suitable for ramie growing. In well-cultivated places where weeds were carefully removed each plant annually produced from 15 to 30 stalks; whereas, in a field, where, by way of experiment, the weeds were allowed to grow, there were only three to five stalks per plant; a weeded part of the same field gave 10 to 15 stalks. It is absolutely necessary to keep ramie fields free from weeds.

Ramie being a very exhausting crop, the question of fertilizers deserves very careful study, for without them crops are poor. Ramie requires plenty of water to properly develop it, but the water must not remain too long in the soil or decay of the roots would be the result. Its cultivation had to be abandoned in two places, where the rainfall did not exceed 35 inches annually. Several samples of ramie fiber were sent by the syndicate to various spinning mills in Europe, where they were regarded as being equal in quality to China grass. It is the intention of the syndicate to degum their fiber themselves, to avoid the cost of transport of the 3 per cent of gummy substances in it.

COTTON.**BRITISH MOVEMENT.****PROGRESS BEING MADE IN THE COLONIES.**

William Harrison Bradley, consul at Manchester, writes that at the meeting of the council of the British Cotton Growing Association, held July 31, it was reported that according to latest advices the prospects in West Africa are very favorable for the new crop, and the planters are exceedingly satisfied with the results of last season's crop.

Mr. W. Howarth, chairman of the West African committee, mentioned that during the half year ending June 30, 3,468 bales of cotton had been ginned and baled at the association's ginneries in Lagos, and it is anticipated that this amount will be more than doubled during the ensuing six months. Arrangements have been completed for the

dispatch of a new ginnery to northern Nigeria, and it is hoped that the same will be ready for shipment by the middle of September.

Mr. Crapper reported that particular attention is being given toward devising a scheme for buying cotton from native growers at fixed prices in British Central Africa. The natives in British Central Africa grew some 70 tons of seed cotton last year, and this season the Government expert estimates that at least 100 tons will be grown, but at present there are no adequate facilities for the natives to dispose of their cotton.

Mr. Stansfield, chairman of the India committee, reported that while the crop last year did not prove a success, owing to drought in some districts and floods in others, the prospects for the cultivation of improved qualities of cotton were most encouraging, and it is estimated that this season the area planted under long-stapled cotton will be four times greater than last year. Interest is also being created in the cotton-growing industry in Ceylon, where the prospects are very promising.

NEW AUSTRALIAN COTTON.

The first sale of Australian-grown cotton was recently held at Liverpool. The 17 bales weighed 230 pounds each, and were produced by Dr. David Thomatis, of North Queensland. Doctor Thomatis claims to have created the king of cotton trees. He has crossed the sea island cotton with various Peruvian varieties, and calls it "Caravonita." He says that six months after sowing it bears a small crop, though it is only 7 or 8 feet high. When 2 years old, it is a full-grown tree. About 900 trees, he says, can be planted to the acre, and each tree produces one-half to 2½ pounds of seed cotton. The Doctor claims a net profit of \$150 to \$200 an acre, even after paying wages of \$2 per day. He estimates a yield of 1,300 pounds of lint cotton to the acre. Cotton growers of Texas are ordering caravonita seed for planting, according to the Mexican Investor.

Consul F. W. Goding, of Newcastle, reports the promotion of cotton growing in Queensland by the establishment at Brisbane of a ginnery. Nearly 100,000 pounds of seed cotton were received at the Ipswich gin, the product of lint being 31,960 pounds of lint and 58,804 pounds of seed. Some of the cotton growers are said to have realized \$80 per acre. It is intended to add cotton-seed oil machinery as soon as sufficient seed is forthcoming.

SUGAR.

THE CUBAN CROP.

SUBSTANTIAL INCREASE IN ISLAND'S PRODUCTION.

Consul-General Frank Steinhart furnishes from Habana a statement of Cuba's sugar crop for the 1905-6 season, showing production, exportation, and quantity on hand, with comparisons of the previous year's crop. The increase amounts to 27,571 tons.

Region.	Sacks exported—		Sacks on hand July 31—	
	1905.	1906.	1905.	1906.
Habana.....	463,426	721,385	626,818	452,164
Matanzas.....	910,575	1,244,093	432,695	93,563
Cardenas.....	904,803	1,001,958	368,493	157,504
Cienfuegos.....	998,523	1,470,528	289,630	83,332
Sagua.....	520,019	595,059	93,324	64,587
Caibarien.....	431,008	527,980	133,544	87,771
Guantanamo.....	297,606	294,003	26,930	9,668
Cuba.....	78,465	79,779	5,500	6,845
Manzanillo.....	303,898	312,691	2,000	10,025
Santa Cruz del Sur.....	71,019	76,005		
Nuevitas.....	85,159	143,980		
Gibara and Puerto Padre.....	388,995	343,057	40,130	16,100
Zaza.....			14,003	18,610
Trinidad.....	70,996	71,191		
Total.....	5,524,492	6,881,709	2,033,067	1,000,169

The sacks weigh 320 pounds each and the crops therefore figure out on the following tonnage basis (long tons, 2,240 pounds each):

	1905.	1906.
Exports.....	789,213	983,101
On hand July 31.....	290,438	142,881
Local consumption.....	25,260	25,950
	1,104,911	1,151,932
Deduct amount on hand January 1, 1906.....		19,450
Received in ports to July 31.....	1,104,911	1,132,482

ISLAND'S TOBACCO AND SUGAR.

HIGHER PRICES FOR LEAF—SUGAR CROP REQUIREMENTS.

The Cuban treasury reports a decrease in the exportation of leaf tobacco in the six months ending June 30 of 2,466,720 pounds, as compared with the corresponding period of 1905. On the other hand, the exportation of manufactured tobacco increased to the extent of 14,000,000 cigars during the first six months of 1906. Cuban manufacturers have suffered heavily because of the bad crop and high prices for material this year. The latest returns of the new crop are more satisfactory, and the shortages, it is said, will be largely covered by the higher prices.

A Habana journal publishes the statistics of the Cuban sugar crops for the last half century. The production steadily increased from 1850, when it was 223,145 tons, until 1894, when the production was 1,054,214 tons. The disturbances on the island caused agricultural stagnation, and it was not till 1904 that this large crop was almost equaled by a production of 1,052,273 tons. For this crop 10,025,087 sugar bags were imported at a cost of \$1,000,127, three-fourths of which were supplied by England. The United States supplied only \$66,262 worth. During the same year the sugar machinery imports were \$616,413, of which \$388,334 came from the United States.

SUGAR BEET IN MEXICO.

PLANS FOR GROWING AND MANUFACTURING ON LARGE SCALE.

According to a report from Consul-General A. L. M. Gottschalk cane-sugar growing in Mexico is to have a serious rival in the sugar beet, which is about to be planted and manufactured extensively in that Republic. That this marks a portending change in the general source of supply of sugar is held by Professor Foex, of the Agricultural College of Mexico, who states that in time sugar cane will become a very small factor in the sugar industry. Mr. Gottschalk writes from Mexico City:

A concession granted by the Government of this Republic is an apparently favorable contract for the manufacture of beet sugar, an industry which has remarkable possibilities in Mexico. The new company, which is to be formed in the United States and with American capital, is to be composed chiefly of men who have had experience in the beet-sugar industry in the Northwest. The concessionaires are Messrs. Thoreson, Fenochis, and Thompson. Their contract permits them to establish in the Federal district or State of Mexico a factory for the production of beet sugar on a large scale, in which shall be invested at least \$500,000 Mexican (\$253,000 United States currency). Within twenty-four months from July 5 the concessionaires are to submit a scheme for the plant, buildings, and dependencies which must have the approval of the Mexican authorities and be completed in five years. Buildings may be erected also at other points with the approval of the Department of the Interior. Two pupils of the national schools are to be admitted to the respective factories to pursue practical studies there. Should the Government require the production of the factories for its own service, the concessionaires are bound to sell the same at a discount of 10 per cent of the wholesale price at which their product is offered to the public. They must also furnish the Mexican statistical offices with data when desired.

The contract contains a clause freeing from all import duties the company's machinery, utensils, building material, etc., for a term of ten years, to date from the inauguration. The capital invested and the shares and bonds which may be issued shall enjoy exemption from all direct Federal taxes, and not including fees for Government stamps. The company is considered as Mexican and is subject to the jurisdiction of the tribunals of this Republic.

POSSIBILITIES OF BEET CULTURE.

It would appear that several years ago the possibilities of beet-sugar culture and manufacture in Mexico attracted the attention of foreigners, Europeans chiefly. Nothing of any import was done, but I find that beet culture has been carried on sporadically, chiefly for the purpose of feeding cattle with the beet root, and apparently with great success. Messrs. Elsasser & Co., on their hacienda de Santa Lucia, have for two years past been cultivating beets on a large scale for feeding their own cattle, and the crop has been such a success as to permit of their shipping large quantities of the product to Mexico

City as cattle feed. I am told that on this hacienda there are from 500 to 1,000 acres of beets sown broadcast by common grain drills without an attempt at scientific irrigation. Extreme drought this year naturally lowered the yield, but during last year, when the rainfall was normal, this hacienda claims to have had a yield of from 16 to 30 tons per acre.

It is said that in and about Mexico City, Toluca, Puebla, Morelia, and many other Mexican cities good land can be secured at low prices by individual purchase, and with proper irrigation and drainage can be made to produce profitable beet crops. It is estimated that beets can be produced at from two to three Mexican dollars (\$1.02 and \$1.52 United States) per ton, or from thirty to sixty Mexican dollars (\$15.18 or \$30.36 United States) per acre, when once the contemplated mills for grinding these beets are completed and the pulp can be returned to the farmers for cattle feed. And one of the concessionaires estimates in this manner he can furnish farmers in the neighborhood of his factory with seed, supervise the cultivation, return them the pulp, and deliver the beets on the cars for \$1.27 United States currency per ton. An interesting analysis made by Professor Foex, a French scientist, who is a member of the faculty of the Mexican School of Agriculture, is furnished by the consul-general.

BEET WILL SUPPLANT CANE.

Professor Foex, after extensive study of the subject, has come to believe that it is merely a question of time when sugar cane will cease to be a factor in the sugar industry, excepting in cases where cane is raised under extraordinarily favorable surroundings, with cheap and easy transportation close at hand. Already it would appear that the cane production of Mexico is more and more being turned into alcohol, a much more cheaply transportable article. Professor Foex believes that the sugar beet has a wonderful future before it in Mexico—first, because the growing season lasts practically ten months of the year; second, because the Republic has transportation facilities almost unequalled in any Spanish-American State; and third, because (on the plateau at least) good labor at not too excessive a price is easily obtained. Beet culture is cheap in Mexico. The beet absorbs the alkalinity of the soil, and in that sense prepares much of the Mexican farming land for future agriculture instead of wearing it out. The drawback of the older beet culture in alkali countries (a combination of basic salts and beet juices yielding a large percentage of molasses) can now be obviated by the new Baryte process. Much of the land here needs beets to neutralize its alkalinity, and the cattle farms welcome so good a fodder as beet pulp. A useful rotation of crops suggested by Professor Foex is the alternation of alfalfa with beets, and he believes that a plantation in the Mexican uplands, carefully managed on this basis, would keep yielding excellent crops for an indefinite period.

COUNTRY ADAPTED TO PROFITABLE GROWTH.

According to my informant, there is a future for beet culture almost all over this Republic. The irrigable lands of Chihuahua, a large part of Durango, and Coahuila—with the difference that the raising season would be a little longer in some places—would be susceptible to beet

culture. The entire central plateau of Mexico would furnish practically a continual crop. The irrigable portions of Yucatan might be successfully tried. The *tierra caliente* or the torrid coast lands alone would seem unfitted for beet culture on an industrial scale, as the saccharine coefficient would not be present in sufficiently large quantities under the climatic conditions there.

Thus far the amount of beet planting has necessarily been governed by the small demand for the product except as cattle fodder. But there is every reason for believing that with the establishment of a factory, managed on broad and generous lines, tenant farmers could be induced to settle in the vicinity of the mills, which could then count upon a constant supply. I am told that the Elsasser plantation at Xolox, above referred to, has already offered to plant from one to two thousand acres over and above their present beet fields, provided the factory in question is erected near them. There is no reason why beet culture should not appeal to the Mexican *hacendado*. He can alternate beets with his present crops of corn or maguey and plant them conjointly. Labor is cheap, 30 to 50 cents Mexican (15 to 25 cents United States) being what the average Mexican farm laborer earns per day on the Mexican plateau.

BRAZILIAN CROP.

OVERPRODUCTION AND PROSPECTIVE HEAVY LOSSES.

Consul George E. Anderson writing from Rio de Janeiro tells of the narrow escape which Brazilian sugars had from being penalized by the Commission Permanente at Brussels. The present course of the sugar trade is shown by the fact that the exports from Brazilian ports in the first three months of 1906 amounted to more than the total exports for any one of the entire years of 1903, 1904, or 1905. The exports in tons for the past five years have been as follows:

Year.	Great Britain.	United States.	Other countries.	Total.
1901	18,525	168,284	857	187,166
1902	32,059	104,052	647	136,755
1903	5,382	16,292	216	21,890
1904	3,302	4,419	440	7,868
1905	15,600	21,000	1,247	37,747
1906 (January-March)	28,858	10,493	77	39,351
Total (5½ years)	103,626	324,240	2,984	430,777

According to the reports which have reached Rio de Janeiro the Brussels conference refused to penalize Brazilian sugars, more through the action and influence of the Brazilian and British representatives than otherwise. The United States has become very independent of Brazilian sugars, and the Brazilian sugar interests at the present time are in a position where they will be compelled to cultivate European markets or else take what the sugar trade of the United States is ready to give for the Brazilian product.

CONDITIONS AT PERNAMBUCO.

Advices from Pernambuco indicate that the sugar business is in a demoralized condition. The total entries at that port for the nine

months from September to June were 1,925,896 as compared with 1,413,164 in the same period the year before. It is stated in trade reports that a million bags of the crop will not come to market, the canes being allowed to remain in the field as not worth the cutting and handling. The weather has been good for the growing crop. The consumption of sugar from the Brazilian markets shows increases in every country but the United States, where there was no increase up to the end of April. The general increase for the past nine months, however, was about 81 per cent, Great Britain taking 152,000 and Europe (continental) 144,000 tons more than the year previous. There are indications that governmental circles in Rio de Janeiro are considerably exercised over the sugar situation, the recent increase in shipments giving them encouragement, while the actual present state of the business indicates that there must be some permanent adjustment of things if large losses in what ought to be a growing industry are to be avoided.

SPAIN.

FAILURE OF THE CROP.

Consul-General B. H. Ridgely, of Barcelona, furnished the figures just compiled by the Central Customs Administration, which show the production of cane sugar in Spain for the first six months of 1906 as compared with the same period of 1905.

From January 1 to June 30, 1905, 308,452 tons of cane entered the refineries, and from this were produced 185,916 tons of sugar. For the same period of 1906, 25,583 tons of cane were entered and 14,512 tons of sugar were produced. The falling off in production in 1906 was due to the almost complete failure of the sugar-cane crop. All the cane sugar of Spain is produced in the provinces of Almeria, Granada, and Malaga. The important refinery is that of Nuestra Señora del Rosario, at Salobrena, province of Granada. This factory produced 30,281 tons during the first six months of 1905 and 2,432 tons during the same period of 1906. There are 35 other cane sugar factories in Spain, but many of them are of trifling capacity, and some produce only molasses.

RUBBER.

METHODS ON THE ISTHMUS.

GROWING CASTILLOA ELASTICA IN REPUBLIC OF PANAMA.

Consul J. C. Kellogg, writing from Colon, states that among the many agricultural products which can be successfully raised in Panama the castilloa elastica (rubber tree) is one which could be especially developed into a very profitable industry.

The productive life of this tree is twenty-five years, it is indigenous to this country, and is found growing wild on both coasts of the Republic. The castilloa will not stand high winds, so wind-brakes, either natural or artificial, must be provided. It requires a well-

drained, rich, loamy soil that will give plenty of moisture during the dry season and not contain stagnant water nor be soggy during the wet season. The method of planting in Panama is by sowing seeds and keeping in reserve a small nursery to draw from in case of failures. From three to five seeds are planted together in the ground prepared for the plantation. Seed costs from 10 to 15 cents per pound. In starting a plantation the use of cuttings is considered the most economical method, the end of the cutting being sharpened and driven into the ground.

The rubber is obtained by making an incision into the bark of the tree. From the opening flows a light yellow viscid liquid containing from 31 to 44 per cent of pure rubber. When subjected to heat this liquid evaporates, leaving the rubber as a residue. The rubber tree is generally tapped when 8 years old. Tappings made in April and in November seem to give the best results. From 20 to 25 trees can be tapped in a day, which, however, must be done in a careful and systematic manner. The most favored method in vogue on the Isthmus is by making two or three V or rectangular shaped incisions in the lower part of the trunk and allowing the sap to flow into earthen vessels, from which it is dumped into a barrel, to which is added a solution of 5 ounces of chloride or subcarbonate of sodium with sufficient water to cover. It is stirred frequently for twenty-four to thirty-six hours, when the water is drawn off through a faucet in the bottom of the barrel. This operation separates the rubber and is repeated until it turns white.

The native coagulating method is to deposit the sap into a hole dug in the ground inside the native hut and pour in boiled soap water while stirring, whereupon a block of rubber forms, which is squeezed until it contains the consistency of new cheese. When brought to market the center of this block of rubber is frequently adulterated with rocks, mud, and other foreign substances. The number of rubber trees in Panama is estimated at 550,000, which does not include 200,000 trees growing wild in the dense forests of Veraguas Province.

The largest rubber plantations under cultivation on the Isthmus are found in the Darien district at Tapia and on the lands of the Mariato and Suay, where a Boston syndicate has a rubber plantation consisting of thousands of trees. The product of these plantations and, in fact, 80 per cent of the total rubber production of this country, is shipped from the city of Panama; the remainder being exported from Colon and Bocas del Toro. The india rubber exports from Panama to foreign countries during 1905 was estimated at 176,000 pounds, valued at \$88,000 gold. The total shipped from Colon district to the United States during 1905 was estimated at 40,000 pounds, valued at \$20,000.

RESULTS IN INDIA.

PLANTATION PROGRESS AND PRICES OBTAINED.

The quantity of rubber extracted from *Ficus elastica* plantations in Assam by the British colonial forest department is stated by the India Trade Journal to have been 14,010 pounds for 1905-6. The average price received was 97 cents per pound, against 88 cents for the 9,387 pounds in 1903-4. The price for *Hevea brasiliensis* rubber in Burma averages \$1.37, but only 1,450 pounds were obtained

from the plantations in 1904-5. The Burma Gazette announces that the Government will make grants or leases of land not exceeding 1,200 acres each for the purpose of planting rubber trees.

In Ceylon the progress of rubber planting is shown by a handbook on the industry. Beginning with an export of 65 cwt. in 1892, when there were about 400 acres planted, the export rose to 676 cwt. (cwt.=112 pounds) in 1904 with 11,000 acres, and then a great rush took place into the planting, so that the latest estimate from the statistics collected is of 60,000 acres of rubber being planted in Ceylon. The export for 1905 was 1,401 cwt., while for the half year of 1906 the return is about 1,160 cwt. In the Malay States there is nearly as much planted as in Ceylon; and we have also to look to southern India, Java, and Borneo, where beginnings in planting have been made. By 1913-14 Ceylon, if all goes well, should be exporting 120,000 cwt. of raw rubber, worth in London from \$12,500,000 to \$15,000,000, even if present prices fall about 20 to 25 per cent.

The recent reports that the Mysore Government had refused to grant further concessions of land for rubber cultivation were based upon the Government's decision to suspend allotments until the principle on which they should be made had been settled. It would hardly be correct to say that southern India has been bitten by the rubber craze, but several important applications for suitable lands are to be dealt with.

SHELLAC PRODUCTION.

INDIA'S HEAVY OUTPUT BRINGS HIGH PRICES.

In the past year the United States has assumed the first place as a buyer of shellac from India, states the Indian Trade Journal, the total for the year 1905-6 being 149.52 lakhs of rupees, or \$4,784,640, as against 94.24 lakhs of rupees, or \$3,015,680, shipped to the United Kingdom, and 44 lakhs of rupees, or \$1,408,000, to Germany.

Shellac is one of the articles of Indian production for which the demand has grown steadily in recent years, and has lately become marked as a consequence of activity in the electrical and certain other industries. Owing to its precarious supply, being a forest product of insect origin, it is a subject of speculation. The highest price recently recorded was \$45 per cwt. (112 pounds) in February, 1906, and the lowest price for the last fiscal year was \$29 in June, 1905. The Indian production of shellac and button-lac in 1903-4 was 228,997 cwt., valued at \$8,565,315. In 1905-6 the output amounted to 259,444 cwt., worth \$9,886,420.

BEVERAGES.

ALCOHOL REGULATIONS.

FRENCH SYSTEM—INCREASE OF ALCOHOL DRINKING AND SUICIDE.

Vice-Consul-General A. E. Ingram, of Paris, describes the French regulations concerning the sale of alcoholic drinks. It seems that the French people, who were formerly large consumers of light wines,

are turning to stronger beverages, including absinthe, and the number of suicides caused by alcoholism is increasing in corresponding ratio. Mr. Ingram writes:

The regulations governing the sale of alcoholic beverages in France are enunciated in the law of December, 1900. Wines, cider, perry, and hydromel (honey wine or mead), all of which are known as hygienic beverages, are relieved from all tax except that of transportation, which is 29 cents per hectoliter (22.0097 imperial gallons) on wines and 15 cents per hectoliter on cider, perry, and hydromel. Fresh vintages that are sent away from the region of the crop in quantities above 10 hectoliters are subject to the same transportation formalities as wines, and are liable to the same duty in the proportion of 2 hectoliters of wine per 3 hectoliters of vintage.

FEDERAL TAXES ARE GRADED.

The consumption tax on brandies, spirits, liqueurs, fruits preserved in brandy, absinthe, and other alcoholic liquors not named, is fixed at \$12.46 per hectoliter of pure alcohol at 100 degrees. The license taxes for retailers and wholesale dealers, of brewers, and of distillers are as follows: Retail liquor dealers are arranged in eight classes, according to the character and volume of business, and pay a quarterly tax according to the population, varying from 96 cents to \$3.62 in communes of 500 inhabitants and under, up to \$4.82 to \$21.70 in communes of over 100,000 inhabitants. Wholesale dealers pay a quarterly tax of from \$9.65 to \$24.12, depending upon the amount annually sold. Brewers pay a quarterly tax varying from \$7.23 to \$24.12, depending upon whether they brew from twelve to fifty times per annum. Distillers pay \$2.89 to \$5.79, depending on whether they manufacture under or over 150 hectoliters per annum.

In communes of less than 4,000 inhabitants the retailers outside of the thickly settled district will be taxed according to the population of their location. In Paris, in default of the declaration of the taxpayer, the administration will have the right to impose of its own accord the tax on all persons inscribed on the list of licenses for a trade involving the sale of liquors.

LICENSES AND PENALTIES.

Every wine grower who desires to sell at retail the produce of his own crop is required to make a declaration at the excise office, to pay the retailer's license and the general and local taxes on the beverages to be sold, and to submit to all the obligations of retailers. Any person other than a wine grower who, for the purpose of selling at wholesale or retail, manufactures wine, cider, perry, or hydromel is obliged to make first of all the declaration at the excise office and pay the license either for a wholesale dealer or a retailer. He must also, immediately after each process of manufacture, pay the tax on the beverage if it is intended for the retail trade. Fresh vintages shipped for manufacturing purposes can be received under certificate.

The Government reserves the right to prohibit the manufacture, circulation, and sale of any spirit recognized and declared as dangerous by the Academy of Medicine. The fines for violation of any of the regulations vary from \$96.50 to \$965, independent of the confiscation

of the apparatus and beverages that might be seized and of the repayment of the defrauded taxes. In case of repetition the fines are doubled. The same penalties are applicable to all persons convicted of having knowingly aided the fraud.

This law is full of complicated regulations and details as to the duties and rights and privileges of private distillers of their own crops. Indeed, for many years past considerable legislation has been enacted on this subject; but by the recent law of February, 1906, a complete change has been effected, and "proprietors distilling wines, wine residue, perry, prune and cherry wine, and lees, coming exclusively from their own crops," are relieved from all declaration and freed from the official requirements. The excise officers, therefore, only intervene in such cases when the alcohol is transported outside of the place where it has been freely produced, when it becomes subject to the tax.

CITY AND CIRCULATION TAXES.

As to the municipal regulations for the sale of beers and light wines in Paris, these beverages are considered as hygienic and relieved of all tax except that of transportation. The octroi or city tax on the alcohol contained in brandies, spirits, liqueurs, fruits in brandy, absinthe, and other alcoholic beverages not named is \$37.63 per hectoliter, in addition to the consumption tax of \$42.46. In other words, the tax on alcohol in Paris amounts to \$80.09 per hectoliter, while in the provinces the tax is \$42.46.

All wines in Paris pay the circulation tax of 29 cents per hectoliter when the percentage of alcohol does not exceed 15°, but when the amount of alcohol is higher, as in certain ports, madeira, vermouth, and certain sweet dessert wines containing from 16° to 20° of alcohol, the excess above 15° is subject to the tax on pure alcohol. No limit is fixed as to the per cent of alcohol in beverages sold in Paris.

In the country at large these regulations are enforced by the officials of indirect taxes, who control and check the declarations made as to the strength and volume of the liquors. In towns of less than 10,000 inhabitants they have the right to enter at any time by day or night the premises where liquors are kept or sold. In Paris this control is exercised in a very thorough manner by the city custom-house.

LIBERAL SALOON HOURS—CONSUMPTION OF LIQUORS.

The retail liquor dealers are allowed to keep open in Paris every day of the year until 2 o'clock in the morning, and in the provinces until 11 p. m. This closing time is readily extended on request. In certain quarters of Paris the cafés and marchands de vin do not stay open longer than the requirements of their customers demand, and are therefore closed about 11. In other quarters of Paris, where there is much business going on during the night and early morning, such as in the neighborhood of the big city markets, the wine shops stay open as long as they wish.

As to the amount of alcoholic beverages consumed in France, the latest year for which statistics are available is 1903, when the wine consumed was 50,832,060 hectoliters; cider, 9,671,918 hectoliters; alcohol, 1,470,776 hectoliters; and vins de liqueurs, 89,567 hectoliters, making the quantity per person—for wine, 131 liters (liter=1.0567

quarts); cider, 25 liters; alcohol, 3.80 liters, and vins de liqueurs, 23 centiliters (centiliter = $\frac{1}{100}$ liter). France is one of the countries where the most alcohol is consumed, and it is the only country, with the exception of Belgium, where the consumption continues to increase. The following are the figures for the average consumption of alcohol per inhabitant in certain European countries, the alcohol being considered as pure—100 degrees: Sweden decreased from 23 liters in 1829 to 3.25 liters in 1890; Norway, 9.5 liters in 1833 to 1.82 liters in 1891; Germany, 9.50 liters in 1886 reduced to 4.40 liters in 1894; England, 2.86 liters in 1852 to 2.22 liters in 1893; Switzerland, 5 liters in 1885 to 3.20 liters in 1892; Belgium increased from 2.94 liters in 1854 to 4.76 liters in 1893; while France increased from 1.12 liters per capita in 1830 to 3.80 liters in 1903.

These figures represent pure alcohol, of which 1 liter is equivalent to about $2\frac{1}{4}$ liters of brandy, so that each person in France, including women and children, consumes each year $8\frac{1}{2}$ liters of brandy, not counting wine, beer, and cider.

ALCOHOL TAKING PLACE OF WINE.

The alarming feature of this increase in the consumption of alcohol is that less wine is now drunk. In 1873 200 liters of wine were drunk per inhabitant in France; in 1885 only 75 liters were consumed. Alcohol had taken the place of wine, and among the alcoholic beverages that now have a hold upon the masses is absinthe.

In 1901 there were consumed in France 297,000 hectoliters of absinthe at 50 degrees alcoholic, and in 1904 it had increased to 359,000 hectoliters. In other words, each inhabitant consumed in 1904 on an average 1 liter of absinthe per annum; but as only one person in every hundred drinks absinthe, the fact is that each absinthe drinker consumes 1 liter of this beverage every three or four days. This liquor has been officially expelled from Belgium, and now the French Government is considering the advisability of taxing it heavily.

As to the extent of drunkenness in France, the latest official statistics are those issued by the ministry of justice for the year 1903. Drunkenness is regarded by the law as a simple offense punishable by a fine of from 20 cents to \$1 and three days' imprisonment at the most in case of repetition of the offense during the year. Repetition of the second offense and punished by the police court is punishable by the "tribunal correctionnel" by imprisonment of from six days to one month and a fine of from \$3 to \$58. In case of another repetition during the year these penalties can be doubled.

ALCOHOLISM AND SUICIDE.

From the statistics it would seem that there was a decline in drunkenness, and probably the active work done by the temperance societies in France may partly account for this. The minister of justice himself, however, when commenting upon the statistics for 1900, said: "It is to be feared that this apparent decrease is due to a relaxation of watchfulness and severity on the part of the officials charged with the execution of this law, for it is certain that for twenty years the consumption of alcohol has increased 20 per cent and the number of hectoliters of absinthe, liqueurs, and other spirits has increased two-thirds."

The following table of suicides throws a sad light on drunkenness

in France. The causes were absolutely proved to be alcoholism or habitual drunkenness, from 1879 to 1903.

Year.	Total of suicides.	Suicides caused by alcoholism.		
		Men.	Women.	Total.
1879	6,496	780	74	854
1881	6,741	809	75	884
1885	7,902	788	80	868
1890	8,410	830	74	904
1895	9,263	1,043	121	1,164
1899	8,952	1,030	128	1,158
1900	8,926	1,061	181	1,192
1901	8,818	1,066	126	1,192
1902	8,716	1,051	125	1,176
1903	8,885	1,019	101	1,120

CHARTREUSE.

THE MONKS CONTESTING FOR THEIR ANCIENT TRADE-MARK.

The expulsion by the French Government of the monks from their convent of La Grande Chartreuse, where for so many years they manufactured the liqueur of that name, has resulted in suits against the use of the trade-mark by the agents of the French Government. The expulsion occurred in 1903, and the monks have settled at Tarragona, Spain, at which point the manufacture of "Chartreuse" has been resumed by them. Prior to the expulsion "Chartreuse" intended for the United States was exported through the American consulate at Grenoble. Consul Charles P. H. Nason, of that place, furnishes an interesting report on the legal contest the monks are making to prevent the use of their trade-mark. The consul writes:

In acquiring the ancient convent La Grande Chartreuse the French Government appropriated the original trade-mark of the liqueur, which had brought enormous revenues to the monastical establishment, and granted the right to use the same to a prominent firm of French distillers. The making of the liqueur was begun again and at the same distillery formerly worked by the monks. Its preparation assumed to differ in no wise from the original formula, and it was put upon the market in the same style of bottle, label, and name. Its exportation followed (in November and December, 1904) to the United States and other countries. But the exportation soon ceased, for the reason that the monks settled in Spain and, exporting their liqueur as the only genuine "Chartreuse," took legal measures to prohibit the introduction and sale of the French or "State" Chartreuse in the United States and elsewhere as an infringement of a trade-mark which had originally been granted and secured exclusively to them. The settlement of these legal processes is still pending in the United States, England, Germany, Switzerland, etc., where equally the monks have complained of the same infringement of their rights.

PROTRACTED LITIGATION LIKELY.

Meantime for nearly three years, and possibly to continue for several years more, in the courts at Grenoble scores of primary and secondary questions as to property transfers and claims, natural and acquired rights, methods of adjudication, and technicalities of one

sort and another are to be passed upon which it is quite impossible for any save experts to follow. As far as can be learned the receiver for the French Government, in view of differences with the distillers to whom was given the concession to make and control "Chartreuse," is endeavoring to form a society, with a capital of three millions of francs, which society shall, under specified conditions, have charge of the entire business. One of these conditions is that the manufacture and sale of the liqueur shall be continued during and until the end of the legal trials relative to the trade-mark or name "Chartreuse," and if they last more than four years the receiver shall thereafter have the right, on his own authority, to offer the "mark" for public sale.

It results, then, that there are to be four "Chartreuses" in the market, namely:

1. The Tarragona, made by the Carthusian monks now in Spain.
2. The old Chartreuse left in stock and limited in quantity, distinguished from the new by words on label "Allier, Imprimeur à Grenoble."
3. The Liqueur Cusenier (first concessionnaire), same bottle and label as preceding, less name of printer.
4. The liqueur to be put out by the proposed new society.

BEVERAGES AND TOBACCO IN BELGIUM.

Consul J. C. McNally furnishes from Liege the following statistics of the consumption of strong drink and tobacco in Belgium:

The population in 1905 was 7,074,910, and the consumption of beer reached the enormous quantity of 428,018,990 gallons, of which 422,618,714 represented home manufacture, while 5,400,276 gallons came from abroad. The consumption of foreign alcohol was 325,447 gallons, while that of home manufacture was 12,963,986 gallons. The consumption of foreign tobacco was 25,547,427 pounds, and of home raised 26,742,273 pounds. The yearly consumption of beer per head was about 60 gallons, of wine about 5 quarts, alcohol (50°) about 8 quarts, and tobacco about 7 pounds.

CEREALS.

AUSTRALIAN PRODUCTS.

LARGE INCREASE IN THIS YEAR'S WHEAT HARVEST.

Consul-General John P. Bray reports from Melbourne that the wheat harvest of Australia for the year 1905-6 compares with that of the preceding season as follows:

State.	Bushels.	
	1904-5.	1905-6.
Victoria.....	21,092,139	23,417,670
New South Wales.....	16,464,415	20,930,282
Queensland.....	2,149,663	1,137,321
South Australia.....	12,023,172	20,143,798
Western Australia.....	2,013,237	2,293,333
Tasmania.....	792,956	752,875
Total for Australia	54,535,582	68,675,279

This crop, which has only once been exceeded, has enabled large exports to be made. A total quantity of wheat and flour, equivalent to 28,152,974 bushels of wheat, has been exported to over-sea destinations since December 15, 1905, the beginning of the export season, while a large quantity is still available for shipment.

INCREASING EXPORTS OF BUTTER.

The Australian butter export season for 1905-6 has now closed, as far as shipments to England are concerned. The progress is shown in the fact that 19,855 tons went to England in 1903-4, 24,368 tons went thither in 1904-5 while for 1905-6 the shipments amounted to 26,450 tons. In addition large shipments have been made to South Africa, the Philippines, and the East.

ARGENTINA PROSPEROUS.

AGRICULTURAL DEVELOPMENT—WHEAT SURPLUS FOR EXPORT.

The correspondent of Dun's Review at Buenos Aires, writing of the development of Argentina's resources and the progress of its foreign commerce, says:

The Government has published its estimate of the wheat crop, which is placed at 3,881,739 tons, which should leave an export surplus of 2,750,000 tons, as against 2,868,000 for last year. Our linseed crop is placed at 640,000 tons, which should leave a surplus of 550,000 tons. The partial failure of the wheat crop in many districts was due to late frosts, hot suns, fogs, and locusts. The maize crop should have over 3,000,000 tons for export.

An idea of how the country is being developed can be gathered from the fact that whereas in 1895 we had 4,892,000 hectares (1 hectare=2.471 acres) under cultivation, in 1905 the area was returned as being 13,081,461, an increase of 167.4 per cent.

The area under wheat in 1895 was 2,049,000 hectares, in 1905, 5,675,293 hectares; under linseed in 1895, 387,324 hectares, in 1905, 1,022,782; under maize in 1895, 1,244,182 hectares, and in 1905, 2,717,300 hectares. Making further comparisons, we find that in 1895 the population was 3,954,911, while in 1905 it was 5,616,968 inhabitants. Railways in 1895 aggregated 14,461 kilometers (1 kilometer=0.621 mile) in length; in 1905, 19,753 kilometers. In 1885 our railways, with a total length of 4,502 kilometers, carried 8,143,960 tons, and in 1905, with 19,753 kilometers, they carried 22,703,550 tons, so that while in twenty years the length of line has increased by nearly 500 per cent, the goods carried have increased by 700 per cent.

MEXICO.

COUNTRY NEEDS BREADSTUFFS.

The conclusion of the wheat harvest in Mexico shows that the crop is far short of expectations, says the Mexican Investor, which states that it will be necessary to again remove the duty on American wheat so that the cereal can be imported in sufficient quantities to supply the Mexican mills. The duty on American wheat was removed at the beginning of this year and was replaced in July. It is said that the Mexican crop will be able to supply the Mexican mills only until November. The importation of American wheat during the fiscal year ended June 30 last was heavier than for many years previous. The wheat brought into Mexico in the twelve months had a value of more than \$2,000,000 gold. The corn crop of Mexico will also fall short of expectations this year, and a big importation of American corn is certain. American corn to the value of about \$1,000,000 gold was imported in the last fiscal year.

INDIA.

THE LARGE WHEAT CROP.

The wheat crop of India this year is a large one. The area sown amounts to 26,226,200 acres, and the yield is estimated at 8,560,000 tons, as against 7,582,000 tons last year, the increase being 13 per cent. The Indian Trade Journal, which makes this statement, says that the government is taking a deep interest in the complaint of the admixture of dirt in the wheat exported. The government has consulted the chambers of commerce, some of whom, however, indicate a reluctance to depart from the present customs of the trade; but the Chamber of Commerce at Karachi, from which 70 per cent of Indian wheat exports are now shipped, strongly supports the government's proposal for 98 per cent pure wheat.

WORLD'S WHEAT CROP.

A LONDON PREDICTION THAT THE HARVEST WILL BE LARGE.

The London Economist, in a long review of the wheat harvest this year, asserts that "the world's cereal harvest of 1906 can not fail to prove one of the greatest ever produced." It remarks that "oats alone, among the cereals in England, seem likely to turn out below the average in productiveness."

In most of the countries of Continental Europe the harvest is a good one. The wheat crop is above the average in the great producing provinces in the north of France, but it has suffered from drought in the south and west. It is thought that France will need to import very little if any wheat. Spain has reaped a good harvest generally, while Germany has good crops of barley and oats as well as of wheat and rye. According to the latest official estimate Austria-Hungary will produce a much larger wheat crop this year than last. From Russia reports vary greatly. The winter wheat crop has been officially reported to be a good one, while the more important spring-wheat crop is a poor one in all but a few provinces. Owing to the wet weather and other causes, one of the smallest crops of recent years was generally expected. Roumania is now expected to produce a record wheat crop, and Servia and Bulgaria have good crops of wheat. The Canadian wheat harvest on the whole will not prove a very abundant one. Even allowing for increase of area in the comparatively new Canadian provinces it is doubtful whether the production will make up for Ontario's deficiency as compared with last year's good crop, and possibly the total will be less than that of 1905. In Australasia the crops, sown under favorable conditions generally, have yet to undergo the hazards of the spring and summer seasons. India's wheat crop harvested last spring was the greatest but one ever known.

COTTON-SEED OIL.

TARIFF EFFECTS ON TRADE IN AUSTRIA.

Deputy Consul Robert W. Heingartner, of Trieste, reports a decline in the importation of cotton-seed oil into Austria, which is attributed in part to the new tariff. He writes:

Statistics for the cotton-seed oil trade of Trieste, which have just been published, show that during the first six months of the current year 72,056 barrels were imported, against 55,113 barrels for the same period in 1905. However, the new Austrian duty, which came into effect on March 1 of this year, put an abrupt stop to the ever-increasing importation of this article. While in February 30,694 barrels were imported, in March—under the new tariff—only 270 barrels entered; and in April, May, and June only 530, 183, and 125 barrels, respectively, a total of only 1,108 barrels, against 42,667 barrels during the same four months of 1905. Cotton-seed oil pays, under the new Austrian tariff, a duty of 40 crowns (\$8.12) per quintal (220.46 pounds) gross. Under the old tariff the duty was only \$1.96 per quintal.

Some remarks made by Mr. Giuseppe Levi, one of the largest oil brokers in Trieste, regarding the new duty may be of interest. He said:

On the 1st of March of this year the new duty on cotton-seed oil came into effect. It is enough to compare the importations of this article from March to June of 1905 with those of the same period of this year to get an idea of how this increase of duty has damaged the oil trade of Trieste.

This prohibitive duty is unreasonable, and the Government which imposed it to protect the interests of the olive-oil producers of Austria was not justified in doing so. Thus the Government sacrificed cotton-seed oil—that excellent surrogate of olive oil—and at the same time, unlogical as it may seem, lowered the duty on olive oil, so that now foreign oils can compete with the Austrian product. The result is that now the Austrian producers must struggle to dispose of their oil, while the foreign product, which is of better quality, is sold in Austria in greater quantities than ever before.

Mr. Levi concludes by saying that importers should make a protest against this prohibitive measure, which has already proved so disastrous to the trade.

IMPORTS AT TRIESTE.

The importance of Trieste as a market for American cotton-seed oil is shown by the annexed table, in which will be found the figures for the ten years ending December 31, 1905, and the first six months of the present year. Quantities received from the United States and Great Britain, respectively, are given:

[Quantities given in quintals—1 quintal—220.46 pounds.]

Year.	United States.	England.	Other countries.	Total.
1896	92,358	5,250	165	97,773
1897	95,722	5,112	80	100,914
1898	141,108	3,379	1,446	145,933
1899	149,450	1,375	2,659	153,484
1900	140,542	2,632	3,123	146,197
1901	126,537	2,587	4,760	133,874
1902	74,274	22,581	12,062	108,917
1903	123,249	24,249	6,472	153,970
1904	138,061	18,547	2,954	159,562
1905	190,042	3,013	3,710	196,765
1906 ^a	63,296	3,932	4,828	72,056

^a Six months.

AGRICULTURE AND MANUFACTURES.

RELATIVE DECLINE IN THE FORMER INDUSTRY AND RISE IN THE LATTER.

The rapid increase in the per capita production of manufactures in the United States as compared with agriculture is more marked with the returns of each year. In 1880 the per capita product of agriculture was \$44, compared with \$107 for manufactures. In 1900 the proportion was \$49 and \$170, respectively. In the last five years, although exact statistics are not obtainable, those which we have show a still larger increase in the products of manufactures compared with agriculture.

The New York Journal of Commerce, figuring on averages, estimates that the total value of products of manufactures in 1905 was \$17,668,000,000, or more than four times that of agricultural products. In 1880 over 83 per cent of the United States exports consisted of farm products; this fell in 1890 to 74 per cent, in 1900 to 61 per cent, and in 1905 to 55 per cent. On the other hand domestic manufactures in 1880 comprised only 12 per cent of the exports, in 1890 they had risen to nearly 18 per cent, and in 1900 to 31 per cent; while in 1905 they reached 36 per cent, and figure about the same for 1906. The high prices for agricultural products make these figures more favorable to agriculture in the exports than would have been the case at the prices of previous years.

The products of agriculture exported in 1906 figure a total value in excess of that of any other year in the history of the country. But there had been a decline in value in the four years following 1901, when the total of exports of agriculture was nearly the same as for 1906. In the case of exports of manufactures there has been a continuous increase, the aggregate value of such exports being much larger for 1906 than in any previous year in the history of the country. That this process will continue is not a question of doubt. With advanced strides, the nation will consume the products of the fields and forests and create a surplus for the products of manufacture, for which markets will be sought throughout the world.

NEW MEXICAN FARM COLONIES.

Concessions have been granted by the Mexican Government for the establishment of farm colonies in Lower California. The "Compañía Mexicana de Terrerios y Colonización" and the "Compañía de Desarrollo de Baja California" each undertakes to settle at least 150 families in farm colonies in that province within three years, and at least 85 families within the following six years. All provisions, furniture, building material, agricultural machinery and implements, and stock cattle destined for those colonies will be granted exemption from import duties.

METALS AND MINERALS.

WORLD DEVELOPMENT MOVEMENTS.

OPENING MID-AFRICA.

RAILWAY DEVELOPS MINING AND AGRICULTURAL REGION.

Consul-General H. L. Washington, of Cape Town, furnishes the following interesting interview from the Cape Times on the resources of northern Rhodesia, made available by the railway extension:

Those who keep an eye on Rhodesian affairs are no doubt aware that great developments are at present going on in the northern territory. Following on important discoveries of mineral ore, the Cape to Cairo Railway has been pushed forward with the greatest energy. The river Kafue, one of the great feeders of the Zambesi, has been spanned by a bridge 1,400 feet long, and the railroad is now at Broken Hill, 130 miles farther north.

A gentleman who has just returned from a visit to the scene of operations says that the country is on the whole very healthy, though there is some fever, which must always be looked for in virgin soil. The plateau north of the Kafue, which the railway has entered, is 4,000 feet above sea level, and the air is bracing, and at the present season is cold. Ice an inch thick may be seen on the pools in the mornings. The country looks as if it could grow anything; the cattle are sleek and healthy, and there is abundance of native labor. Some day the agricultural resources of this territory will be developed by the white man with great benefit to South Africa. But for the present mining enterprise is the chief interest; the farmer will follow when the mining camp gives him the market. The three mining companies which have the chief interests in the district are the Rhodesia Copper Company, the Northern Copper Company, and the Broken Hill Development Company.

PROFITABLE ZINC AND LEAD MINING.

Broken Hill is the present railway terminus. The mining field consists of a number of kopjes which have only to be quarried for the zinc and lead ore which they contain. Of this ore, according to the engineers, there is at least 750,000 tons in sight and proved, going down to the water level of 30 feet. The mines are now being worked, and the first trial shipment of zinc was dispatched from Beira to Swansea, Wales, the other day. The zinc ore is quarried out of the kopjes and calcined on the spot. The ore gives 50 or 60 per cent of zinc, and the cost of mining and sending the ore to Wales, including all charges, should be about \$19.47 a ton, and assuming the cost of treatment at Swansea to be 24 cents a unit, that would make \$14.60 a ton to reduce it to spelter, so that to produce crude zinc should cost

\$34 a ton of ore. With 50 per cent of metal that would make \$68 a ton of zinc, while the present market price of spelter is between \$131 and \$136. The lead ore will be turned into pig lead on the spot, and as this ore is also rich, it is expected to show a profit of something like \$34 a ton at the present prices.

Arrangements are being made for continuous shipments, and it is intended to work the mine up to 500 tons of ore a day. Thus Broken Hill will furnish the railway with a traffic of \$5,840 a day, so that, assuming the working expenses to be 60 per cent, there would be \$2,336 a day profit to the railway.

A GREAT COPPER MINE—MALACHITE CAVES.

Railway surveys are being made to Bwana M’Kuba, about a hundred miles north of Broken Hill. Mines there are very rich in copper. The old workings by the natives extend 2,500 feet in length, and go down a hundred feet. They show two reefs, one 12 feet and the other 8 feet wide, with a space of 30 feet between them. The two reefs come together and form a body of ore 12 to 15 feet in thickness. The reefs have been proved to a depth of 280 feet, and the copper averages 15 per cent. A feature of the mines is the extraordinary malachite caves, which go down to a depth of 60 feet at one place in pure malachite. The malachite contains no less than 35 per cent of copper, and is therefore quite valuable. These mines, like the Broken Hill mines and the railway, will be operated with Wankies coal, which is secured on the railway 50 miles south of the Zambesi, and can be taken up cheaply in the empty ore trucks.

With a view of verifying the accuracy of the foregoing statements, several gentlemen possessed of an intimate knowledge of the Rhodesian country have been asked for their opinion, and they state the account to be in no way exaggerated.

SUBMARINE COAL MINING.

METHODS OF OPERATIONS IN NOVA SCOTIA.

Consul-General W. R. Holloway, writing from Halifax, says that there are now in Cape Breton six collieries working under water.

The largest is the Princess or Sydney pit in Cape Breton Island. This colliery was the first in North America to mine coal from beneath the bed of the Atlantic Ocean. The seam of coal averages between 5½ and 6 feet thick, of best quality. The angle of dip or inclination seaward is 5 degrees, or about 1 foot vertical in 12 horizontal. The working of the “whole coal” under the sea by the bore-and-pillar system was commenced in 1877, under an overhead cover at the shore line of 690 feet of solid measures, although part of the workings driven to the rise under Sydney Harbor was operated under a cover of 500 feet or less.

The present workings are distant from the shore line 5,800 feet to the dip. At this point the overhead cover is 1,140 feet in thickness of strata, with 33 to 40 feet depth of water above it. The undersea workings in the whole coal cover 1,620 acres. No sea water has yet found its way into the workings as a result of removing the pillars. A feeder of a few gallons of water per minute was encountered in some whole-coal workings driven to the rise, as also at the face of the water

levels driven in the direction of the outcrop to the south, but this water evidently followed the seam of coal downward from its outcrop under the waters of the harbor. There has been no water known to come from overhead across the measures.

This immunity from overhead leaks from the ocean is probably due to the presence in the superincumbent strata of 12 beds of fire clay or underclay of a total thickness of 39 feet, as well as to the numerous beds of shale. The subsidence of the overhead strata caused by the removal of a bed of coal 6 feet in thickness would probably under these conditions soon choke itself, so that there would be no further actual motion or settling of the strata for more than, say, 100 feet upward. Above that point the elasticity of the beds of shale and fire clay mentioned would prevent any rupture. Fire clay when brought into contact with water soon forms a soft clay resembling putty and impervious to water. Out of the submarine area there has already been taken some 5,250,000 tons of coal from the main seam, while the company has also commenced the working of another and thicker seam in the same area, from which in all likelihood they will secure as much coal as has already been taken.

COAL AND METAL ACTIVITY.

According to Consul J. C. McNally, at Liege, the Belgian coal exportation for the first half of this year was 2,453,441 tons, a 10 per cent increase. The importation in the same period amounted to 2,602,260 tons, against 1,937,955 tons for the same period last year. The coke exportations reached 184,307 tons and importations 423,380 tons for the first half of this year. The coke production is always bespoken, and the demand seems to be increasing. The demands for the Belgian metallurgic products are sufficient to keep all the works employed. It is said that a San Francisco order to a German firm for 10,000 tons of bars has been refused.

AUSTRIAN MINERAL PRODUCTION.

The Austrian Government has issued its mineral statistics for 1905. The production in metric tons was: Brown coal, 22,692,076; coal, 12,585,262; graphite, 34,416; asphalt, 4,362; gold ore, 35,936; silver ore, 21,047; quicksilver ore, 86,856; copper ore, 10,677; iron ore, 1,913,781; lead ore, 23,338; zinc ore, 29,982; tin ore, 52; antimony ore, 1,673; arsenic ore, 3; uranium ore, 1,635; tungsten ore, 58; iron pyrites, 8,407; alum shale, 1,657, and manganese ore, 13,788. The metallurgical production included 947,034 tons of forge pig iron and 172,578 tons of foundry pig iron.

ANNUAL TIN PRODUCTION.

The tin prospects in the United States are covered in an annual report of the Geological Survey. During 1905 there was no actual production of metallic tin in this country, the only ore output being a very small quantity from Alaska placers. The most active tin-mining work is being carried on around King's Mountain and Lincolnton, N. C., and Gaffney, S. C., where machinery has been placed at several mines.

An estimate of the tin output in foreign countries for 1905 is as follows: Malay States, 65,565 net tons; Bolivia, 13,646 tons; Banka, 11,155 tons; Cornwall, 5,040 tons; Australia, 5,028 tons; Billiton,

2,715 tons; total, 103,142 tons. This amount is about the same as that of the 1904 production.

CANADA'S PROPOSED COBALT WORKS.

The proposed \$450,000 German-Canadian cobalt smelter is to be established on the Temiskaning and Northern Railway, advises Consul E. A. Wakefield, of Orillia. It is stipulated that the German process to be used must be kept secret, and the experts to be Germans. The works will be started with the wet and dry process, first a concentrating plant to treat low-grade ores, then a cobalt oxide works, and lastly a roasting plant. In Germany 52 per cent of the world's production of cobalt oxide is used, and the German superintendent guarantees a market for 100,000 pounds annually.

SHEFFIELD'S STEEL TRADE.

GROWING SHIPMENTS TO UNITED STATES—AMERICAN IDEAS ADOPTED.

Consul Charles N. Daniel shows by a comparative detailed statement that the export trade of Sheffield with the United States continues to grow.

The total declared value of goods exported for the six months ended June 30, 1905, was \$1,258,051; same for six months ended December 31, 1905, \$1,619,310, while for the six months ended June 30, 1906, the figures are \$1,901,832. The following table shows the comparative gain or loss in the principal articles of export:

Article.	January 1 to June 30, 1905.	July 1 to December 31, 1905.	January 1 to June 30, 1906.
Blanco (pipe-clay preparation)	\$11,206	\$15,714	\$34,971
Brass scrap	51,423	87,441	101,020
Cutlery, including razors.....	156,548	169,048	169,331
Cutlery (butchers').....	19,269	23,097	22,284
Die blanks (steel)	1,132	985	1,046
Edge tools.....	7,551	5,785	5,794
Furnace flues.....	6,711	3,904	8,670
Grindstones	4,660	6,077	4,599
Graining combs	1,460	2,361	1,788
Garden tools.....	3,247	5,670	5,637
Horn, and manufactures of.....	64,758	68,362	65,588
Horsehair	25,737	40,766	9,141
Iridium powder	375	.....	2,665
Lead tubing	883	1,588	8,311
Measuring tapes, rules, etc.....	18,308	17,532	22,707
Machinery .....	.....	2,679	7,003
Motor-tire pumps.....	859	279	681
Platinum sponge	8,504	11,862	29,074
Pearl, and manufactures of.....	10,420	13,243	13,310
Railway buffers	2,944	6,545	.....
Rail benders and braces.....	335	221	1,270
Raddle	1,383	2,009	.....
Steel, sheets, bars, wire, etc.....	830,624	1,090,771	1,351,284
Saw plates.....	127	1,337	330
Shears (sheep and garden).....	17,691	27,408	21,112
Spindles and flyers	1,552	.....	2,347
Trees	1,030	110	2,231
Twist drills.....	.....	4,364	6,232
Umbrella ribs.....	.....	6,832	983
Vegetable fiber	1,940	1,184	2,689
Wheels and axles.....	272	1,191	916

This report shows that the gain in the year's trade is very largely confined to the item "steel." The steady increase in this material, all of it high priced, may not be of sufficient amount to attract the attention of the American steel manufacturer. Whether it does or does

not, that it is a source of gratification to the Sheffield trade is evidenced by an extract from an article that appeared in a local paper recently. The writer says under this head:

BIG DEMAND FOR HIGH-SPEED STEEL.

Business in all branches of the steel trade is still characterized by much steadiness, both with regard to home and foreign demand. The activity in all the engineering and shipbuilding branches is bringing much work to this city. The statement that the calls for high-speed steel are increasing may be more than repeated. The requirements of American customers are described as "phenomenal." It is roughly estimated that not less than 100 tons of this steel is going to the States every week. The significance of this fact will be more apparent when it is added that the prices vary from 28 cents to 97 cents per pound and the run is mainly on the better qualities. The Americans were the first to put this steel on the market and they have allowed the enterprising firms of Sheffield to practically run away with the trade. "They can't," says a local maker, "make high-speed steel equal to ours and so we get the trade." The use of this steel at home is extending.

Another writer, touching upon the same subject, says:

An interesting theory is current in Sheffield steel circles to explain the reason why United States manufacturers are abstaining from the manufacture of high-speed twist drills, and are allowing the trade in them to drift to Sheffield; it is, that they realize that the general use of such drills would reduce enormously the consumption of drills made of ordinary carbon steel of which they are the largest producers. United States firms are sending out circulars and advertisements asserting that in the long run the ordinary drills are more economical and satisfactory than the high-speed variety.

Whether this is the case or not, and whether such an attitude, if taken, applies to high-speed steel generally as well as to twist drills, it would seem to be failing of its purpose when it allows the trade of this city, in this one item alone, in the six months just passed, to reach the figure of \$1,351,284, as compared with \$830,624 for the corresponding period of a year ago, and \$687,826 for the six months ended June 30, 1904. Aside from this one item the gain, as shown by the statement, is distributed over the different items, and can be accounted for by the general improvement in trade.

HOW SHEFFIELD SELLS GOODS.

The steady increase of Sheffield's trade with the United States, in spite of the tariff, is worthy the careful study of the American business man seeking a foreign market. So far as my observation goes, in every case when gain is shown it is the result of personal representation in the foreign market either by an individual whose whole time is devoted to the interests of the firm employing him or by an American firm of established reputation.

After having arranged for representation, managers of Sheffield's large firms make frequent trips to the United States, study the market and its wants, endeavor to produce an article suited to the local needs, and when once they have established a reputation for their product they are particularly careful to see that it is always kept up to the required standard. Little or no dependence is placed upon catalogues or advertising.

VALUE OF PERSONAL REPRESENTATIVES.

Some of the Sheffield firms have been represented for more than fifty years by men located in the various large cities of America, sent over there for that purpose alone. While this is an expensive way, it results in building up a trade that the home firm can maintain against all competitors, and if this holds good with American trade, given, as

it is said, to proneness to change and experiment, the same would have even greater force here, as the English are slower to change their ways or adopt new appliances, but when finally convinced of the wisdom of making a change, would be less inclined to change back again.

Spasmodic advertising and attempting to establish business by correspondence will not accomplish in years what one personal visit of a thoroughly competent man, fully empowered to speak and act for his firm, would. To those seeking to establish a permanent foreign outlet for articles of real merit this can all be summed up in a few words: First, get personally acquainted with the trade you are seeking; second, establish the reputation of the goods you have to offer, and then see to it (in the case of the English market at least) that you live up to the reputation thus established.

CHARCOAL IRON.

PRODUCTION DISCONTINUED IN WALES.

There seems to be a misunderstanding in the industrial world as to what is meant by Welsh charcoal iron, writes Consul D. W. Williams, of Cardiff, who says that there has been no charcoal blast furnace operated in Wales for a century and a half.

They were shut down one by one on account of the disappearance of the forests, and the last of any importance, that at Hirwain, near Merthyr-Tydfil, went out of blast about 1750. But "charcoal iron" used as a base forterne and tin plate was made in forges until a decade or two ago. The last forge in the forest of Dean was dismantled about 1886, and the last of any importance in Wales were closed about 1890. The result is that no pure charcoal iron is now made in Wales. There are many blast furnaces in Wales, but none of them depend upon native ore, for the entire quantity mined in 1905 was only 363 tons. The bulk of the ore is imported from Spain, and the ore-carrying trade forms a large part of the import business of the Welsh ports. Further, all the furnaces in Wales, with the exception of those of one company, are said to use scrap in the making of pig iron.

It is reported, further, that no tin plates are made from pig iron manufactured in Wales, and to my knowledge there is only one firm in England which makes pure charcoal-iron sheets and plates, and this firm at Stourport is said to use all of its own product. About two years ago two companies endeavored to revive the manufacture of charcoal terneplates in Wales, in order to supply an American demand, but the difficulty of securing charcoal tin plates was so great that the attempt was given up. It is confidently asserted that no roofing plates are made in England or Wales from pure charcoal iron. It should be noted, however, that the quantity of roofing plates needed in this country is comparatively small, for practically all roofs are made of slates, tile, or iron.

The degree of prosperity enjoyed by the trade in this country is dependent in a measure upon the importation of steel from other countries. Oddly enough, the lower price at which these importations are secured enables the trade to compete with the foreign manufacturers of tin plate. The imports of steel bars and billets into this consular district during the year 1905 amounted to about 146,840 tons, of which 50,840 tons came from the Continent and about 96,000 tons came from the United States.

FABRICS.

PRODUCTION AND SALE.

BRITISH APPAREL.

PEOPLE WHO BUY LONDON-MADE CLOTHING.

The London newspapers have recently been devoting considerable space to the discussion of the question as to which is the best dressed people, the English or the Americans. This discussion has pushed the subject-matter from its dilettante sphere into statistics by the publication of the following statement of "a leading West End tailor" in the London Mail:

No Englishman orders his clothes from America; few Americans who can afford it and who prize style, quality, and fit order their clothes anywhere else but in London. The extent of this trans-Atlantic trade has already been pointed out by the Daily Mail, and I am within the mark in saying that the very existence of some of our most famous firms in West London depends upon this American custom. The cultured American is probably as well dressed in all respects as any man in Europe, but in saying that we are only paying ourselves a compliment, for almost without exception the clothes come from London.

It is evident from the drift of this question that it has a more practical and substantial basis than the mere matter as to which is the best dressed people, viz, the creation of a public opinion in the United States that English-made clothing is worn by all fashionable Americans, for our British friends are under the impression that if they can clothe fashionable Americans, who can afford the luxury of British apparel, they will thereby create a public opinion which will result in enlargement of their trade. The statement of the leading West End tailor carries its own refutation. If "Americans who can afford it and who prize style, quality, and fit" ordered their clothes in London there would not be tailors enough in that city to supply the American demand, for it is no exaggeration to say that there are more people in the United States who can afford "good clothes" and who wear good clothes than in all Europe, where, as a rule, outside the privileged classes, there are comparatively few persons who can afford fine clothes, or who aim to be well dressed, according to the "West End" estimate.

WHAT THE FIGURES SHOW.

The danger in all such assumptions of superiority as that of the West End tailor is that people in general are apt to accept the trumpeters at their own high estimate. To counteract such trade clacks, as well as to show American clothiers where they may expect to find foreign markets for their surplus products, the following tabular

statements have been prepared, covering the exports of British apparel to the several countries during the calendar year 1905:

Description.	Value.	Description.	Value.
WATERPROOF.		APPAREL OF OTHER MATERIALS.	
To foreign countries (none to the United States)	\$612,700	United States.....	\$181,600
To British possessions.....	496,600	Portuguese East Africa.....	168,800
Total.....	1,109,300	Netherlands.....	116,800
WOOL, OR FROM WOOL MIXED WITH OTHER MATERIALS.		Chile.....	92,100
France.....	361,300	China.....	91,300
Germany.....	228,300	Brazil.....	87,700
Portuguese East Africa.....	208,300	Belgium.....	87,700
Belgium.....	190,800	Argentina.....	80,900
Chile.....	127,000	All other.....	556,400
Netherlands.....	124,500	Total to foreign countries.....	1,463,300
Egypt.....	95,900	British possessions:	
United States.....	93,900	Cape of Good Hope.....	3,496,400
All other.....	541,400	Natal.....	1,131,100
Total to foreign countries.....	1,971,400	Australasia.....	2,763,300
British possessions:		Canada.....	451,600
Cape of Good Hope.....	3,225,800	British India.....	380,200
Natal.....	1,623,000	British West Indies.....	874,400
Australasia.....	1,934,100	All other.....	743,300
Canada.....	844,900	Total to British possessions.....	9,340,300
British India.....	478,400	Total to foreign countries and British possessions.....	
Newfoundland.....	445,000		10,803,600
All other.....	788,800		
Total to British possessions.....	9,340,000		
Total to foreign countries and British possessions.....	11,311,400		

RECAPITULATION.

The following table shows the value of all descriptions of wearing apparel exported in 1905 from Great Britain and the countries to which exported. It will be noted that in a total of \$23,224,300 only \$275,000 came to the United States.

Whither exported.	Value.	Whither exported.	Value.
British South Africa (Cape of Good Hope and Natal).....	\$9,727,200	British West Africa.....	\$295,000
Australasia.....	4,834,800	United States.....	275,500
Canada.....	1,370,000	Netherlands.....	267,300
British India.....	933,600	Chile.....	231,500
Newfoundland.....	520,400	China.....	171,600
Germany.....	466,500	Egypt.....	165,900
France.....	445,000	Brazil.....	146,500
Portuguese East Africa.....	377,100	Argentina.....	103,400
British West Indies.....	374,400	All other.....	2,174,000
Belgium.....	344,600	Grand total.....	23,224,300

“SLOPPY” APPAREL.

Up to and including the year 1903, British official publications entered the exports of clothing under the head of “Apparel and slops.” Although the word “slops” was dropped at that time, a glance at the foregoing tables will show that more than nine-tenths of the apparel

exported in 1905 were "slops," cheap ready-made clothing suitable for the South African, Australasian, Canadian, Indian, and West African trade, and that very little of the remaining one-ninth was exported because of its "style, fit, and superiority."

It may safely be assumed that the exports of British clothing of "wool and wool mixed with other materials" are those referred to by the West End tailor in the London Mail, as composing the clothing of "all well-dressed Americans who order their clothes nowhere else than in London." As these "well-dressed Americans" are preceded in the well-dressed international procession by South Africans, Australasians, Canadians, British Indians, Newfoundlanders, French, Germans, East Africans, Belgians, Chileans, Dutch, and Egyptians, they cut a very poor even if a very select figure.

The fact is that the British clothing trade with the United States can hardly be called even a nominal trade, and if that skillful West End tailor had only substituted British South Africans, Australians, and West Africans for Americans, when he says that "the very existence of some of our firms in the West End depends upon this American custom," he would be standing on indisputable ground, but it is not easy to see how their existence depends upon "well-dressed Americans" who do not wear London West End clothes. The foreign clothing trade of the United Kingdom is very large and profitable, and, as the time is at hand when our clothiers must seek foreign markets for their surplus output, the foregoing tables, showing where that Kingdom finds markets for its apparel, is worthy of careful study.

BRITISH TRADE ACTIVITY.

GRAND RESULTS FOR FIRST HALF OF THIS YEAR.

That British trade has been exceedingly active this year is shown by deductions made by the British Trade Journal from official figures of the United Kingdom for the first six months.

Imports were valued at \$1,465,000,000, and exports of British and Irish products at \$880,000,000. If one may also take into account re-exports of foreign and colonial goods, a prospective grand total of foreign and colonial trade for 1906 is figured at a probable \$5,000,000,000. The greatest changes in foreign trade have taken place in iron and steel manufactures, cotton, wool, silk, and sugar. Making a comparison with the first six months of 1904, the imports of refined sugar fell by 184,000 hundredweights to 8,664,000 hundredweights, whereas unrefined sugar imports advanced from 7,601,000 hundredweights to 8,461,000 hundredweights in the first half of 1906. British imports of silk manufactures dropped from \$35,291,858 in the first half of 1904 to \$33,583,717, while exports of silk manufactures rose from \$3,519,385 to \$4,175,019.

During the same period imports of iron and steel manufactures increased only \$2,852,723, while those exported increased \$21,631,375. In machinery imports went up only \$1,671,594, while exports have grown \$11,920,030. Imports of woollen manufactures grew from \$28,031,040 to \$31,817,047, whereas exports of such manufactures mounted from \$61,381,165 to \$76,915,032. This is taken as a sign that the population has increasing purchasing power as regards clothing. The

imports of raw cotton have grown from \$130,000,000 to \$148,000,000; cotton manufactures from \$15,000,000 to \$25,000,000, while the exports of manufactured cotton increased from \$195,000,000 to \$215,000,000 for the half years being compared. The total British imports increased by \$145,000,000 over the first half of 1904; domestic exports by \$180,000,000.

COTTON GOODS IN GREAT DEMAND—WOOLEN GOODS' INCREASE.

The British foreign trade returns for July show further expansion, especially in the textile export division. The shipment of cotton manufactures increased during the month by over \$7,000,000 over July, 1905, bringing up the expansion in these goods for the seven months of the current year to considerably over \$27,000,000.

Shipments of British piece goods in July aggregated 573,527,800 yards, of the value of \$34,058,458, compared with 510,440,000 pounds and \$28,507,172 in July, 1905. There were large increases in the exports to Turkey, Argentina, and India, and improvements of greater or less importance in nearly all the markets which they supply with textile manufactures. Woollen goods show an increase for the month of \$2,485,944, an improvement for the seven months amounting to \$9,999,251. An increase of \$577,648 for the export of apparel is partially accounted for by an expansion of \$124,830 in the shipments to South Africa, which seems to indicate improvement in the demand in that country. The total shipments of British apparel to South Africa for the seven months amount to \$5,977,891, as compared to \$4,984,580 for the corresponding period of last year.

HOSIERY.

ENTERPRISE AND PUSH OF GERMAN MANUFACTURES.

Consul Frank W. Mahin, of Nottingham, furnishes an interesting report on the manufacture of knit goods, from which the following is taken:

The term "hosiery," which includes socks, stockings, and knit underwear, by improvement and development of machinery, is now being extended over an infinite variety of other knit fabrics, including blouses, jerseys, tam-o'-shanters, and the like. The neatness and smartness of these garments, when knit, clinging closely to the form, are pushing the woven equivalents out of the trade. The Germans are given the chief credit for initiative in knit goods. They have built special factories and put in special machinery for them. This, coupled with certain advantages in dyeing and ability to produce cheaply, has given them, it is said, almost a monopoly of the European trade.

The Germans have even commanded the British market, but as the extraordinary demand for their product disables them from filling orders within many months after they are placed, the English manufacturer sees and is grasping his opportunity. Admittedly he can not produce and sell as cheaply as the German, but he can fill orders promptly. This fact, with the natural desire of the British to buy home products, encourages the belief that the English manufacturer

can at least secure the home market, if he may not be able to compete elsewhere with the German. Moreover, many of the machines with which the Germans are achieving prosperity in knit fabrics are British make, hence this country is manifestly equipped with the weapons most necessary in the contest. The present local activity in the production of knit fabrics, or preparations therefor, indicates that the German invasion is to be repelled if possible.

PROSPEROUS LACE TRADE.

The Nottingham lace trade in all lines is highly prosperous, but the activity in the plain net branch is extraordinary. It is fairly impossible to place a new order for manufacture. All the mills are crowded months ahead—as far as eighteen months in some cases, it is reported. The export of nets to the United States is large, but the bulk of the trade is with the continent—chiefly with Calais and Lyons, France; Plauen, Germany, and St. Gall, Switzerland. There the nets are used as the ground for lace and embroidery fabrics. Nottingham produces most of the net used everywhere for such purposes. The unusual activity of the lace trade is well illustrated by the fact that the local lacemakers' society for the first time in the present century has a balance in hand out of the assessments paid by members to aid those sick and out of work. It is therefore proposed to increase the stipends paid the unemployed and incapacitated members.

GERMAN COMMERCE.

EXPANSION IN EXPORTS OF TEXTILES—POSITION IN CHINA.

In ten years Germany's power to export textiles increased so fast that a comparison of two years, 1894 and 1904, can not fail to excite interest and possibly emulation upon the part of people more favorably supplied with the raw materials used in the manufacture of textiles. In 1894 Germany's textile and felt exports, including clothing, of which large quantities are exported, amounted to 105,200,000 tons, valued at \$159,222,000; in 1904 the amount was 143,300,000 tons, valued at \$249,186,000. The record of 1905, as far as it goes, shows a still more remarkable increase. Whether the upward movement indicated is to continue will depend very much upon the Empire's ability to secure favorable trade treaties.

Everything known to science and trade has been done by German textile workers to increase their sales in new markets and to secure their position in old ones. They have increased the number of workers in the foreign fields and have sought in every possible way to comply with the wants and demands of customers. The Imperial Government has given aid by instructing its consuls to cooperate with the work of the manufacturers and by sending out commercial and technical experts to study and report on conditions in foreign markets.

RAW MATERIALS.

Germany has to buy abroad a large part (all of certain kinds) of the raw materials used in her textile industries. In 1894 she imported

711,300 tons of raw material, worth \$139,944,000. Of these she reexported 132,300 tons, worth \$30,226,000. The 579,000 tons, worth \$109,718,000, were worked up in the Empire. In 1904 953,900 tons, worth \$251,000,000, were imported, of which 172,900 tons were re-exported, worth \$47,838,000. Germany itself supplies considerable quantities of raw textile materials—hair, wool, flax, hemp, etc.

If note is taken of the fact that 781,000 of the 953,900 tons of raw materials imported were worked up into manufactured products, in addition to the supply of the Empire itself, and there be set over against it the exports of textile manufactures, 143,000 tons, worth more than \$238,000,000, it is evident that the home market is at least three or four times as large as the foreign market. At home the manufacturer is helped by a high protective tariff; abroad he has to encounter competitors of unquestionable skill.

CLASSES OF TEXTILE EXPORTS.

The Empire's exports consisted of cotton goods, \$33,796,000 in 1894, \$80,206,000 in 1904; woolen goods, \$44,506,000 in 1894, \$59,500,000 in 1904; silks, \$24,752,000 in 1894 and \$34,748,000 in 1904; clothing and various classes of dry goods, \$14,280,000 in 1894, \$23,800,000 in 1904; woolen yarns, \$10,234,000 in 1894, \$15,708,000 in 1904; cotton yarns, \$3,808,000 in 1894, \$7,140,000 in 1904.

Woolen goods, that once led cotton goods, have fallen behind the latter, due, undoubtedly, to causes that are worthy of study. The exports of cottons advanced in the ten years 138 per cent; those of woolen goods, only 34 per cent. The large importations of woolen yarns, particularly worsteds or combed yarns, fell off from \$23,900,000 in 1894 to \$19,000,000 in 1904 while the importations of cotton yarns increased from \$10,710,000 to \$15,946,000, due, though not entirely, to increased prices. Both the cotton and woolen industries of Germany are far more independent of the outside world for their partially manufactured supplies, yarns, etc., than they were in 1894, or even in subsequent years.

A belief is gaining ground and finds support in the technical press that the Empire's textile trade is susceptible of expansion. Attention has been called to the fact that although China is one of the largest purchasers of cotton goods, and notwithstanding the fact that Germany occupies a favorable if not fairly commanding position in the East, she sold China less than one-half of 1 per cent of that Empire's purchases of \$86,870,000 worth of cottons. The actual figures are \$404,600.

POSSIBILITIES IN ASIA.

Germany, say its experts, has never sold as much of any kinds of goods in the East as its powers and position as a manufacturing country would seem to warrant. Her total exports to the East in 1904 amounted to less than \$30,000,000. She sent China \$12,614,000, Hong-kong \$1,713,600, Kianchow \$1,808,800, Japan \$13,756,400, Korea \$47,600; and in all these the share of textiles is hardly worthy of mention. This is thought to be due to the fact that the Empire's textile concerns do not seem to care about the production of large quantities of the coarser grades, such as are produced in England and the United States.

An alarm is being sounded. If Germany is to secure such part of

the world's textile trade as would seem to be warranted by her efforts and capacity her experts believe German manufacturers will have to go to the Far East for it, as those of Great Britain have done and those of the United States are preparing to do. It is further urged that a country that can send out more than \$25,000,000 in cotton cloth in a single year and cotton goods worth more than \$80,000,000 to all parts of the world, except China, ought to be able to enter the East at all points and to sell where others sell.

BELGIAN TRADE OPERATIONS.

A PROSPEROUS THREAD AND TISSUE INDUSTRY.

Consul J. C. McNally, of Liege, reports that 1905 was a satisfactory year for the woolen yarn and cloth producers of Belgium.

Not only were the home demands good, but orders from abroad enlivened the situation by influencing a competitive entrance into markets which by reason of customs duties was previously not inviting. This industry in Belgium, as well as everything pertaining to the manufacture of cloth, is advancing substantially and keeping pace with Belgium's industrial progress.

The importation of carded thread in 1905 amounted to 341,222 pounds, against 195,162 in 1904. France was the principal beneficiary with 177,676 pounds, against 87,802 in 1904. This increase was due to the vogue in which carded wool articles were received during the year. The importations of combed woolen thread for 1905 were 1,391,551 pounds, against 1,548,646 in 1904. France sent in 1,159,217 pounds, against 1,209,604 in 1904. While not marked, there is a steady decrease in this importation. The exports in carded thread for 1905 shows a considerable increase over the previous year, or about 19,800,000 pounds, against about 17,600,000 in 1904. Of the 1905 total England received 14,491,463 pounds, France 1,560,856 pounds (against 404,162 pounds in 1904), and the United States 25,683 pounds. The 1905 exportation of combed thread was 3,200,107 pounds, against 3,074,808 in 1904. This increase is wholly due to the demands of Germany and France.

The importations of the various woolen fabrics in 1905 amounted to \$3,669,088, the weight of which was 6,588,562 pounds, against \$3,625,499 and 7,074,335 pounds in 1904. The exportation of light tissues, cloth, cashmeres, coatings, duffels, and heavy tissues amounted to \$2,678,774 in 1905, against \$2,751,151 in 1904.

The wool importation for consumption in 1905 was 140,490,991 pounds, against 52,828,681 in 1904. The customs authorities fix the value of wool imported into Belgium in 1905 at \$36,457,516.

BELGIAN TRADE IN 1906.

Consul-General Church Howe, of Antwerp, states that the statistics of Belgian imports, for home consumption as well as those for the exportation of Belgian products for the first six months of the current year, show a marked increase over those for the same period of 1905.

Importations amounted to \$306,190,254 as against \$274,516,638, an increase of 11.5 per cent. The exports of Belgian products for the first six months of 1906 were valued at \$229,427,206, as against \$197,871,573 in 1905, an increase of 15.9 per cent.

WEAVING SCHOOL.

IMPORTANT AID TO LOCAL INDUSTRIES.

Consul Ernest L. Harris, of Chemnitz, reporting on the operations of the weaving school of that city, points to the work done in the past fifty years. He writes:

The weaving school at Chemnitz has made such progress during the past few years in the point of pupils attending and continually increasing number of teachers being employed that the old quarters have been outgrown, and a new and spacious building has just been moved into. The cost of tuition amounts to \$64 per annum for pupils of German nationality and \$150 for foreigners. Each pupil must pay an additional fee of \$7 to cover expenses for weaving materials used in instruction. A few stipends are granted each year to talented and needy students. It has been the experience of the school that all who complete its curriculum find ready employment immediately upon leaving the institution. The new building has been constructed at a cost of \$60,000, and the Government of Saxony has voted a sum of \$3,000 annually as a fund for its support. This amount has been secured for a number of years to come.

THOROUGH EQUIPMENT.

The school was originally founded about fifty years ago, and will therefore soon celebrate its semicentennial. During this time more than 2,000 pupils, skilled in all the arts of the textile industry, have left its halls and taken their places among the ranks of those who by virtue of patience, diligence, and intelligence have raised the manufacture of dress goods, hosiery, fabric gloves, etc., in Saxony into world-wide importance. To support the theoretical instruction, laboratories and practical workrooms, fitted up with the latest machinery of various kinds, run by electricity, are placed at the disposal of the students. Liberal collections of designs and a small library are also constantly in use, the one in practical instruction and the other for reference. That the school stands high in the estimation of the Chemnitz manufacturers is amply proven by the numerous presents which are continually given to augment the effectiveness of the various collections, as well as the laboratories, library, etc.

ORIENTAL CARPETS.

DECLINE OF SHIPMENTS TO THE UNITED STATES.

Consul T. H. Norton, of Smyrna, in his annual report furnished interesting information in regard to the manufacture and export of Oriental carpets, from which the following is taken:

The trade in carpets with the United States has fallen off considerably in the past two years. The preference for "antique goods," which are a class of rugs and carpets procurable on the market in Constantinople and which come from Persia, the Caucasus, and Mesopotamia, has greatly affected the demand for the genuine Smyrna articles. Dealers here claim that most of the carpets sold in Constanti-

nople have the name without the quality of being antique, but nevertheless they are sold as such and an enormous trade is done in this line. There is no end to the varieties made in bright colors which find their way to the Stamboul market and which would almost be unsalable but for treatment with acids, which tone down the colors and give superficial appearance of age. Most varieties contain more or less cotton in the form of weft, which serves to give the carpet body and stiffness. The carpet by this treatment loses in value by reason of the inferior density and the diminished quantity of wool employed.

PRIMITIVE METHODS USED IN WEAVING.

Looms are almost always worked by women and girls. It is not an unusual sight to see girls under ten years sitting by their mothers helping to tie the knots. Commencing at this early age they become expert when womanhood has been reached, and work so rapidly that the eye can not follow the movements of the hands. None of these earn more than 30 to 40 cents a day. The looms may not belong to the people who work them. Every producing center has its own methods and customs, widely differing in many instances. In some places the looms belong to the man who furnishes the work, and who is supposed to act as an intermediary between the weaver and the Smyrna merchant. The cost of looms is trifling, as they are made in a primitive way out of coarse timber without iron. Looms are scattered throughout the towns and villages, and the merchant who has 50 looms has to inspect them every day to make sure that his carpets are made in compliance with instructions.

The six heaviest purchasers of rugs in 1904 were France, \$282,200; Austria-Hungary, \$89,700; United Kingdom, \$160,000; Germany, \$62,000; Belgium, \$43,850; and the United States, \$41,000.

MANCHURIAN TRADE COMPETITION.

AMERICAN COTTON GOODS VERSUS JAPANESE AMBITIONS.

Consul-General Henry B. Miller forwards from Yokohama the following frank interview with a Japanese cotton manufacturer as published in the Japan Chronicle:

President Yamanobe, of the Osaka Cotton Spinning Company, has just returned from a business tour in Manchuria and Korea. He says the prospects of the Japanese cotton goods market are very promising. The goods shipped for Manchuria during May by the Sanyei Kumiai, a syndicate for the export of cotton goods, amounted to 1,000 bales. The syndicate is prepared to ship 1,500 bales this month (June), 2,000 bales next month, 2,500 bales in August, and 3,000 bales in September.

"In our eyes," says Mr. Yamanobe, "the purchasing power of the Manchurians is almost boundless. The inhabitants of Manchuria are much better off than the Koreans, and in addition to this advantage about 20,000 persons are yearly flowing into the country from Shantung and thereabout. These new settlers add to the demand, and it is difficult to imagine how great will grow the consumption of cotton goods in Manchuria. Japanese sheetings, which have been placed on the market by the Newchwang office of the Mitsui Bussan Kaisha since April last, are finding ready sales. This is due to the cheaper price and good quality of our goods, and we must maintain this condition to the end and strive to take into our hands at least one-third of cotton goods supplied to the Manchurians by America, by whom the market has been monopolized. American cotton imported through the Newchwang customs house alone amounts to 70,000 bales a year, and the value of each bale is about \$70. But there is also a large amount imported by junks, and the grand total supplied by

America is about 140,000 bales. So large is the demand in Manchuria that it can be scarcely supplied if the whole production of sheetings in Japan, 120,000 bales, is shipped thither. Under the present state of things it is entirely out of question to drive away American goods from the Manchurian market, but it is generally admitted by sensible men, Japanese and foreigners alike, that Japanese cotton textiles will conquer the Manchurian market in the end. There are already signs of this.

AMERICAN GOODS CONGESTED.

The market for American goods is extremely unfavorable, and supplies are as rapidly getting congested as Japanese goods are being cleared. During our stay in Manchuria a commission of foreign merchants in Shanghai arrived, and the commission seems to have been convinced that Japanese shirtings are a powerful rival to foreign cotton. The price of Japanese shirting is about \$2.25 per piece of 40 yards, against the American which is valued from \$3.25 to \$3.75, while the quality of the two is almost alike. Under these circumstances, the success of our goods in the contest with American goods is already beyond doubt. Japanese goods enjoy a further advantage. They are admitted duty free at Tairen (Dalny) while American goods have to pay an import duty of about \$2 per bale at Newchwang. This privilege of the Japanese will be removed sooner or later, as a Chinese custom-house is to be shortly established, but I feel assured that the balance is in our favor.

VALUABLE MARKET.

Manchuria itself is one of the best markets in the world for cotton textiles. The art of weaving is yet in a very primitive state, and as it can by no means be improved in the near future, the inhabitants must look abroad for the supply of the cotton stuff for their clothing. The large majority of the population are peasants and laborers, and they are naturally inclined to prefer coarse and more durable Japanese cottons to finer calico. I have come back loaded with great hope for the market of our shirting. The most hopeful field for our cotton goods is the country north of Kwang-chen-tze—the region about Changchung and Kirin. Textiles are sent into Mongolia in considerable quantity from Kwang-chen-tze. In short, cotton goods will find the better market in Manchuria the more they are sent farther north-eastward.

If the market is to be more rapidly extended in Manchuria, it is necessary for Japanese weavers to have in Kwang-chen-tze headquarters for the sale of goods. In Manchuria the demand for cotton yarn is on the decrease, as the demand for cotton fabrics is rapidly increasing. The decrease of sales of the former, however, may be offset by the increase in other parts of North China. Japanese engineers, the advisers to the public works bureau of Chihli, are now training over 200 Chinese in operating the battan weaving looms. These operators are to be sent out to various places in the province each with a loom, and will teach the people how to work it, with a view to disseminating the use of the loom in the interior of China and improving the weaving industry. When this plan is put into execution, it will call for the increase of cotton yarn.

PROFITS OF CHINESE COTTON MILL.

The Chinese cotton mill at Hangchow, China, which is conducted on foreign lines, has done excellent business during the past year, having made a profit of some \$183,000. The total output of yarn was 3,100,000 pounds, being an excess of 220,000 pounds over 1904. The raw cotton is almost entirely produced locally, and the price paid for it averaged last year 18.80 taels (tael=71.9 cents) per picul of 133½ pounds, as against 19.50 taels in 1904. The chief difficulty with which the mill was confronted was an increase of over 100 per cent in the price of coal. Seventy per cent of the yarn was sold in the Province and 30 per cent in the "Riverine" ports.

A new cotton mill on foreign lines is to be erected at Kashing. The site for it has been prepared, and it will probably be finished before the end of this year.

TRANSPORTATION.

THE AUTOMOBILE INDUSTRY.

SPANISH CONDITIONS.

FEW AMERICAN MAKES ARE OFFERED.

Consul-General Ridgely, of Barcelona, writes that the only automobiles, with a few exceptions, in use in Spain are of French or Spanish make. A few Oldsmobile runabouts from the United States, and perhaps a half dozen German machines, have found their way into the country, but all the others are French or Spanish.

There is only one automobile manufactory in Spain, but that is a good one and is rapidly taking possession of the Spanish market. It is the Compañía Hispano-Suiza, of Barcelona, and its factory is in Barcelona. The chief engineer and the man who founded the company is a Swiss. Less than three years ago he succeeded in getting the necessary capital for establishing the business, and the enterprise was successful from the beginning. Last year, besides spending large sums in enlarging the works and in all sorts of betterments, the company paid its stockholders 11 per cent net dividend. This Spanish company is undoubtedly making first-class automobiles. Until this year it turned out only 14 to 18 horsepower and 20 to 24 horsepower machines. This year, however, it has begun to make 40-horsepower cars, and has delivered five or six of these machines within the past month. The secret of its quick success perhaps lies in the fact that it builds its machines with an eye to their use on the bad roads of Spain. Certainly in no well-known country of Europe are the roads generally so bad as they are in Spain.

KIND OF MACHINES NEEDED.

Some of the French makers, notably Berliet of Lyons, appreciating these conditions, have built high-sprung automobiles specially for Spain, and as a consequence the Berliet machines in particular are more seen here than those of any other foreign make. As yet there is no very general demand for automobiles in Spain; there is, however, a good demand for machines of high class of from 20 to 40 horsepower, and it is clear that this demand will grow steadily. Whether or not cheap machines of 8 or 10 horsepower will ever be popular here is problematical. The roads are so bad and frequently so hilly that, as a rule, high-power machines are required. Moreover, the introduction of cheap machines is going to be considerably hampered by the new tariff, which has almost doubled the customs duties. Until the Hispano-Suiza began to manufacture here this duty was

about \$190 on a four-seated car, but the new company, claiming protection as an infant industry, succeeded in getting the rate nearly doubled in the tariff which went into effect on the first day of last month.

It may be stated that in view of the Spanish and French hold upon the market, and of the high rate of duties recently established, there does not appear to be much of a field in Spain for American automobiles at this time. If any of our light and cheap cars could be successfully introduced, I am inclined to think those of the buck-board sort, if really as sturdy and simple and as small of consumption as they are reported to be, ought to be the ones to please the market, and if our manufacturers would only be a little daring and send some of these buck-board autos to Barcelona in the hands of intelligent salesmen, I repeat that, in my opinion, there would be a prompt demand for them.

RATES OF DUTY.

The customs duties, it should be stated, are assessed on the weight. The maximum rates are as follows: Any open auto car of any sort would pay 1 peseta (19.3 cents) per kilogram (2.20 pounds) and in addition 200 pesetas (\$38.60) on the coach work. Thus a car weighing, say, 2,200 pounds (1,000 kilos) would pay, if an open car, 1,000 pesetas (\$193) on the weight and \$39 on the body, or \$232 in all; if it were a closed car it would pay 320 pesetas (\$62) on the case, or \$246 in all.

When a car weighs more than 1,000 kilos, the duty on the weight is 20 per cent higher, or 1.20 pesetas (24 cents) the kilo, instead of 1 peseta, the price for the coach work being always the same, i. e., 200 pesetas (\$39) for open cars, and 320 pesetas (\$62) for closed cars. The average French touring car weighs about 3,960 pounds (1,800 kilos), and I presume our American touring cars are of about the same weight. Thus at 1.20 pesetas (24 cents) per kilo it is not difficult to estimate what the duty would be. The minimum rates of duty to which imports from the United States are also entitled are 0.80 peseta per kilo on cars weighing up to 1,000 kilos, and 1 peseta per kilo on cars weighing above 1,000 kilos. The duty on the coach work is the same for both the maximum and the minimum tariff.

It may be stated that the price of the Hispano-Suiza 20-24 chassis, in Barcelona, is 17,400 pesetas (\$3,358); the price of the 40-horse power chassis is 24,400 pesetas (\$4,709). Any sort of a simple open coach work here would cost at the very least \$600. A good limousine body, made by a good maker, costs at the least \$1,200. The best French machines can be delivered here at about the same prices.

NETHERLANDS.

OUTLINE OF SALES METHODS IN HOLLAND.

Consul-General S. Listoe forwards from Rotterdam the names and addresses of Netherlands automobile dealers, which can be secured from the Bureau of Manufactures. Mr. Listoe describes the trade in that country as follows:

The import duty on automobiles in the Netherlands is 5 per cent of the value. Nearly all motors use benzine, which can be had everywhere and costs from 8 to 10 cents per liter (1.0567 quarts) retail.

The restrictions with reference to the storage of benzine are very reasonable and do not affect the consumption. Motor cars are generally imported from European countries with the tires on. It seems, however, to be the opinion of dealers that it would be better to have American motor cars arrive without tires, but with steel Westwood rims, purchasers preferring to buy the tires here. Automobiles arriving by rail are usually imported set up in crates, but when arriving by vessel from the United States it is considered best to have them knocked down in cases. While the general condition of the roads and highways of the Netherlands is good, the country has thus far been a poor field for the sale of motor cars. Still there is a reasonable percentage of wealthy and progressive people in the Netherlands who can easily afford to be owners of motor cars; but the people are conservative, and it will take years before the advantage of owning an automobile will be sufficiently appreciated.

The dealers in automobiles do not, as a rule, purchase direct from the manufacturers; the trade is practically in the hands of appointed agents who have the cars in commission. In order to sell automobiles in the Netherlands, the cars should be on the spot for inspection with a live representative to solicit orders from dealers. At any rate, one machine should be sent as a sample, since every automobile must have a license here, and this permit is not granted until the machine has been examined by a Government official. While there are no special obstacles to the introduction of American goods here, there are no special advantages. The length of time it takes for articles ordered to reach the Netherlands, the smallness of the stock for inspection and to fill immediate needs, and the "cash against documents" payment system are certainly to the disadvantage of American manufacturers.

BELGIUM.

ACTIVITY IN MANUFACTURE—GROWING IN POPULARITY.

Consul-General Roosevelt, of Brussels, in reply to a request for information in regard to the status of the automobile trade in Belgium, points out the popularity of the automobile and the tendencies of the times. He writes:

The manufacture of motor cars is very active in this country, especially as concerns touring cars. For the last two or three years business houses have been making a larger use of motor cars for commercial purposes, and I understand with unvarying success as regards cost of keep and working capacity. Most of the motor cars in use in this country are of Belgian and French manufacture, the latter being slightly ahead of the former in many points.

Motoring has greatly increased in favor in Belgium, as the roads are generally very good, being hard and smooth and fairly well kept. The most popular cars are those having two or four cylinders and from 10 to 50 horsepower. If American automobiles of every description were introduced with the same zeal as those of other countries I am positive our manufacturers would in a short time do a profitable business in this country.

The duty on automobiles coming into Belgium is 12 per cent ad valorem.

ENGLAND.

FIELD FOR AMERICAN INGENUITY AND ENTERPRISE.

Consul-General Robert J. Wynne, writing from London, says that a determined effort is being made in Parliament, and before local authorities to check or modify if possible the noises, smells, vibrations, smoke, and noxious gases caused by the rapidly increasing use of motor busses threatening to push the antiquated and picturesque horse omnibus from the streets of that metropolis.

Property owners complain of dust, cracked plaster, and reduced rentals. Tenants along the route of travel protest against a sleep-destroying racket and danger to pedestrians. Scientists are insistent that the already overimpregnated air of the city is poisoned still more and to an alarming extent by foul vapors from imperfect naphtha and petroleum combustion. Notwithstanding the uproar created by the dissatisfied, the supply is not equal to the demand for the swift-going vehicles. It is almost impossible to get a seat on any motor bus, except at points of prominence, where the places of departing passengers are filled at once.

Inventors or manufacturers of motor busses and tires in the United States who can overcome the faults complained of, will find a ready market for the right kind of a public machine. Already American machines for private owners are coming into more general adoption. Orders ahead for certain makes of American cars can not be supplied, so great is the demand, wheretofore European makers have been considered unapproachable.

The main points from which improvement may be hoped are (1) pneumatic tires, which will stop the house-shaking vibration, put an end to the clashing and clanking of metallic parts, and by saving these from harsh vibration, prolong their life and keep them noiseless; (2) mechanical improvements which will end the smoke nuisance and render the omnibus more reliable, safe, and inoffensive.

The most important reform recommended by the Royal commission on motor cars, which has just published an 80-page blue book, is the removal of the speed limit (now 20 miles an hour) on straightaway roads; also the adoption of a 12-mile speed limit at dangerous corners, steep hills, and other places to be marked where caution is demanded.

MOTOR INDUSTRY FLOURISHING.

Consul Frank W. Mahin, of Nottingham, reports great activity in the extension of electric-motor machines in Great Britain. He writes:

There is a general movement among the great English railways to establish electric suburban lines. The successful working of those thus equipped has led to the discussion of the feasibility of establishing main lines also. The chief objection advanced is the vast amount of capital now invested by railways in steam equipment. The answer made thereto is that an electric line costs less than a steam line to operate and maintain and is capable of earning a greater percentage of interest on the capital invested, and, consequently, in time would repay any loss incurred by a change of motive power.

The automobile industry is so flourishing, from the very large demand this year, that the factories in various parts of this country, so far as heard from, are planning or actively engaged upon extensions. The British industry now uses some \$30,000,000 capital and employs about 20,000 hands. The present demand is unprecedented; so great indeed that the home factories can not possibly fill it, hence are forced to supplement their output by importing foreign cars and parts thereof. In the first seven months of this year over 3,000 foreign automobiles were imported, costing over \$5,000,000, and also over \$5,000,000 worth of parts of machines.

IRELAND.

AUTOMOBILE SHOW IN DUBLIN.

Vice-Consul A. D. Piatt reports that the Irish Automobile Club has arranged to hold a show of motor cars on the grounds of the Royal Dublin Society at Ballsbridge, Dublin, from January 5 to 12, 1907.

All applications for information and space should be made to Walter Cawood, esq., St. James Hall, Manchester, England, who has charge of the undertaking. As this show will be open to all manufacturers of motor cars and motor accessories it will be a good opportunity for American manufacturers to introduce their cars to the Irish market. At present a few makers seem to do almost the whole of the automobile business. The few American cars to be seen on the roads in Ireland, such as the White steam car, the Cadillac, and Winton, have a good reputation. Motor manufacturers who wish to cultivate the Irish market will find it to their advantage to exhibit their cars at the coming show. They should also arrange to have Irish representatives and not depend entirely on a central firm in London to look after their interests in the United Kingdom. Indeed, if several American firms opened a joint house in Dublin they would soon find it profitable, if only well-made and durable cars were sold.

BRAZIL.

GOOD OUTLOOK FOR AMERICAN MACHINES.

Consul-General George E. Anderson writes that at the present time there is a very encouraging outlook for American-made automobiles at Rio de Janeiro.

There has been a building boom in progress in the city for some time and it has taken the form, among others, of a boom in the construction of several fine avenues and a boulevard system which contemplates something like 17 miles of an asphalt drive along the bay. Naturally such an opportunity for automobiles is attractive, and there are not only a large number of machines now in use, but the number is rapidly increasing. In line with the general trade situation here, the natural disposition of Brazilian buyers has been to go to Europe for their machines, but there are a number of good American machines here, and it seems probable that all that is necessary for more American trade in this line is proper efforts to sell the American machines. It is a matter of fair competition in a fair field, and that American manufacturers have not sold more machines is due to the lack of efforts in that behalf. In a city which, with its suburbs, reaches well

toward a population of a million, there is a considerable field for further effort. There seems to be no preference in the way of machines, all grades of all kinds at all prices being seen in use. As elsewhere, the majority of the automobiles in use are of medium grade and medium price.

There is a similar, though smaller, field in most of the cities of Brazil, and, with the general wave of improvement now sweeping over these cities, there will likely be increased demand for automobiles. Outside of the cities there is very little demand, in most places none at all. The settled portions of Brazil cover rough country, in which improved roads are practically unknown, and while there are exceptions to the rule, of course it is probable that there will be little demand for automobiles in country districts for a long time to come. American manufacturers desiring to get into the Rio de Janeiro market may be able to accomplish something by addressing the firms whose addresses are inclosed. [They can be obtained from the Bureau of Manufactures.]

SOUTH AFRICA.

CHANCE FOR AMERICAN-MADE MACHINES.

Consul-General H. L. Washington, writing from Cape Town, supplements a statement published in Consular and Trade Reports for June 18 on motor trains in South Africa by the following clipping from a local paper:

"The motor car running on the Cookhouse-Somerset Line seems unequal to requirements, as it has been unable to complete the journey on several occasions, with the consequence that the good old steam engine has had to be requisitioned. The convenience of a motor-car service on a line unable to support a frequent train service is undeniable. The pity is that a better and stronger class car was not imported. The unreliability of the car on the Cookhouse-Somerset Line will shake the confidence of the traveling public in its ability to carry them to their destination, and there is the possibility of many patronizing carts who would prefer other methods of locomotion. Meanwhile it is only right to assure the public that the Cape government railways are faithfully fulfilling their undertaking of a tridaily service, and trains are run when the motor fails. There should be no delay in ascertaining if more substantial motors are procurable than those now in use in this colony. Greater horsepower and additional accommodation are required."

RAILWAYS.

LINE TO HUDSON BAY.

REVIVAL OF MANITOBA GRAIN-SHIPPING PROJECT.

Consul G. B. Ravndal, of Dawson, supplies the latest information as to the Canadian project to build a railway line from Manitoba to Hudson Bay, and operate steamship lines for the grain traffic from Churchill, in Hudson Bay, to Liverpool during July, August, September, and October, each year. Mr. Ravndal writes:

Actual work seems to have started on the extension from the Prince Albert branch of the Canadian Northern to Fort Churchill, on the

west shore of Hudson Bay. A report from Winnipeg states that the contract for grading from the main line to Pas Mission has been let, and that this portion of the Hudson Bay line must be finished during the present year. Pas Mission is situated on the banks of the Saskatchewan River, some 95 miles northeast of Erwood. Canadian Northern surveyors report that railway construction to Fort Churchill will be comparatively simple. Erwood is in the Province of Saskatchewan, a little way west of the Manitoba border, and Pas Mission, in the district of Keewatin, which lies directly under the control of the Dominion Government. The distance from Erwood to Fort Churchill is about 500 miles, and it is expected that the extension from Pas Mission to Fort Churchill will be completed in time for the wheat crop of 1908 to be taken out through the Hudson Bay straits.

Some people, after conferring with prospectors and surveyors from the North, believe that the region in the vicinity of Hudson Bay is destined to become more famous for its mineral wealth than either the Yukon, or British Columbia, or the new eldorado at Cobalt. That delay may occur in the construction of the Hudson Bay railroad is indicated by Toronto newspaper statements, which oppose the granting of new land subsidies to the enterprises. The present subsidy is 12,800 acres along the proposed route, which the company would like to select elsewhere.

For some years past an impression has been prevailing that coal existed somewhere on the Hudson Bay slope. Recently extensive anthracite beds have been found in the neighborhood of Albany River, a stream which forms the dividing line between Ontario and Keewatin. The full significance of these discoveries can only be realized when they are considered in conjunction with the vast deposits of iron ore throughout the northern part of Ontario. It is claimed that with coal

mines convenient to the iron ore deposits there is no reason why New Ontario should not in time rival the great manufacturing centers of Pennsylvania. As a further means of opening up New Ontario it has been practically decided to continue the Cobalt Railroad to James Bay, which constitutes the shallow southern waters of Hudson Bay.

MANCHURIAN PLANS.

JAPAN ANNOUNCES FORMATION OF NEW COMPANY.

Ambassador Wright, at Tokyo, reports, under date of June 15, the publication of a Japanese imperial ordinance promulgating regulations for the establishment of the South Manchurian Railway Company for the purpose of operating the railways and adjacent mines in southern Manchuria.

According to these regulations the company's shares are to be held only by the governments and subjects of Japan and China. The Japanese Government may put in its share of the capital in the form of the railways and mines that it now possesses in Manchuria, notably the southern section of the Chinese Eastern Railway Company and the coal mines at Fushan and Yentai. The company is to have its head office in Tokyo and a branch office in Dalny. The regulations further provide for the appointment of a commission to take all necessary measures for the establishment of the company. It is expected that

the first president of the new company will be Professor Fairnichi, now president of the Susen-Seoul Railroad.

Commenting upon the new company the Nichi Nichi Shimbun remarks that some say the capital of the new company will be 120,000,000 yen (yen=49.8 cents), while others say it will be 150,000,000 yen, and that about 50,000,000 yen will be needed for adopting the standard gauge and for buying new rolling stock. Also that a part of the capital will have to be used for improving the Fushan coal mines so that the annual output may reach from 1,500,000 to 2,000,000 tons, and that the Russian plans for harbor construction at Dalny will be completed.

The ambassador adds that it need scarcely be noted that the proposed change in the gauge of the South Manchurian Railway will undoubtedly create a large demand for American locomotives and railway supplies.

MECHANICAL SUPPLIES FOR CHINESE RAILWAYS.

Consul-General Thomas Sammons sends the following valuable short report from Newchwang:

His Excellency, M. T. Ling, recently appointed by the Chinese Government as taotai, with headquarters at Newchwang, effective following the Japanese evacuation, has been a prominent figure in directing the affairs of the Imperial Chinese railways. He speaks and writes English well, and informs me that the Imperial Railway management expends approximately \$1,500,000 gold annually in the purchase of foreign mechanical supplies.

ITALY.

GOVERNMENT OWNERSHIP OF LINES.

A dispatch from Rome states that when the first portion of the Italian railways came under control of the Government, on July 1, 1905, the Italian State system included 6,625 miles of line. With the bill recently passed by both branches of the Italian Parliament, which provides for the acquisition by the State of the lines of the old "Meridionali," 1,382 miles will be added to the State system, which will bring the total of the State lines up to this time to 8,137 miles. As much as \$300,000,000 was estimated to be necessary to bring Italian State lines into full working order. The Italian board of directors are straining every nerve to improve the chaotic condition of the service, and a complete scheme is now under consideration. A large quantity of new rolling stock will be necessary. Large orders have already been placed for the current fiscal year. These include 485 locomotives, of which number the Baldwin Company, of Philadelphia, received an order for 20. German and Austro-Hungarian firms received orders for about 120 locomotives, and the remainder are to be built in Italy. There will have to be a large addition to the number already ordered, and a great many passenger carriages, luggage vans, trucks and wagons, and pressed-steel cars.

GREAT BRITAIN.

NEW SYSTEM OF RAILWAY SIGNALING.

Consul Frank W. Mahin reports from Nottingham that the Great Western Railway has successfully experimented with and just installed on a branch line a method of audible signaling as a substitute for the familiar semaphore system which it is believed will be entirely displaced in course of time.

The new system is electrically worked and is declared to be simplicity itself. The engine as it travels along the line comes into contact with an apparatus, fixed to the track, which is worked from the signal box, and sets in motion a form of mechanism on the engine. Instead of the engineer having to look out for his signals, they declare themselves to his ear unmistakably. "Line clear" is expressed by the blowing of a whistle, which continues until the engineer with his own hand turns it off. Both bell and whistle are fixed inside the engine cab, close by the engineer as he stands to his lever, and should afford a more telling means of notification than a dial on which signs appeared. The substitution of audible for visible signals would relieve engineers of the strain of perpetually looking out for any particular signal or lamp. The apparatus is so constructed that if anything went wrong anywhere the whistle signal would operate. The chief value of the audible signals would be found in foggy weather and the new system is therefore of particular importance in a country so fog-afflicted as England is.

STEAMSHIPS.

AUSTRALIAN LINES.

GOVERNMENT PURPOSES ENGAGING IN THE BUSINESS.

John P. Bray, consul-general at Melbourne, reports on late shipping topics as follows:

A majority of the members of the commission appointed by the Australian government to inquire into the mail services and shipping facilities of the Commonwealth have recommended the establishment of a national line of steamers under direct control of the government. The commission reports that eight steamers, of 12,000 tons each, at a total cost of £3,000,000 (\$14,599,500), would provide a fortnightly service between Australia and London equal to that of any of the private companies engaged in such work, and would return an annual profit of about £112,000 (\$486,708). This recommendation will be considered by Parliament during the present session, and is favorably commented upon by merchants and others interested in the export business.

The Peninsula and Oriental Company (English), which runs a fortnightly line of passenger and mail steamers to Australia, has decided in addition to such service to run a monthly line of purely cargo steamers to Australia via the Suez Canal and China during the busy

freight season from November to February. The cargo steamers are about 7,000 tons each, and will take cargo from Liverpool to the East via Suez, thence to Australia, with the products of China and Japan, and return to Liverpool with Australian wool, wheat, frozen meat, etc. These regular steamers will fill a long-felt want, as hitherto the ordinary tramp steamer has had to be relied upon by the Australian exporter in dealing with the usual surplus of outward freight at such time of the year.

Extensive improvements are to be effected in the port of Melbourne. It is intended to widen and deepen the river Yarra to allow ocean-going vessels of the deepest draft to be berthed in the Victoria dock within half a mile of the city. At present such vessels must load and discharge in Hobsons Bay, over 4 miles distant. The government of Victoria has appropriated the sum of \$125,000, and the improvements are to be made at once.

BLACK SEA SHIPS.

NEW STEAMSHIP SERVICE INAUGURATED.

Consul M. A. Jewett, of Trebizond, Turkey, reports the establishment of a new steamship service between Liverpool and ports of the Black Sea. One of its objects is to forward American goods destined for countries bordering on or behind the Black Sea.

One great drawback to the extension of American trade with this consular district has been the absence of direct steamship communication with the United States, and the resulting slow transit, the expensive and embarrassing transshipments, the uncertain and high cost of freight, etc. American flour, for example, could at times find a market here, but the difficulty was that the transit was so slow that the flour was apt to be damaged before it arrived, and the local market would be supplied from Marseille or Odessa and the price here lowered while the American flour was en route. It was uncertain, also, what it would cost when it was delivered here. It appears that these difficulties will be obviated to a considerable extent by the new line which the Moss Line and the Ellerman Line have just established. They propose to work in conjunction, and have a fortnightly service between Batum, Trebizond, Samsoun, Constantinople, and Liverpool, calling at Malta. Only one transshipment for American freight will be required, viz, at Liverpool. Through bills of lading will be given to America, employing at Liverpool the Cunard and White Star lines. Freights will be made as low as possible, and an attempt will be made to meet the competition of the German lines.

MISCELLANEOUS.

IODINE PRODUCTION.

SEAWEED BURNING IN NORWAY.

BASIC IODINE INDUSTRY OF SCANDINAVIA—LOWER PRICES REALIZED.

An article by Consul B. M. Rasmusen, of Stavanger, entitled "Importance of seaweed," published in Daily Consular and Trade Reports for January 15, has brought him numerous letters of inquiry from Scandinavia, Great Britain, and lately from the United States. These inquiries embrace many topics, and cover the various stages from the sprouting of the weed to the finished product, while the article referred to treated the subject from an economic standpoint only. With a view of answering the letters received from persons in the United States who are interested in this industry, Mr. Rasmusen transmits the following translated article from a Norwegian journal on "Seaweed burning," which treats the subject in a practical way:

The annual income (in Norway) from seaweed ashes amounts to about \$107,200, but it can be doubled. Every fisherman knows the difference between alga and tang. Only the former can be used as raw material for the iodine and chloriodic industry; tang is entirely worthless. But of the different kinds of alga, it is immaterial, or nearly so, whether one makes use of the large, strong stalks or the broad-leaved kind; when the weed is carefully handled, one can secure an excellent product. If tang is burned with alga the value is decreased considerably, and all such wares should be refused. It is defrauding the purchasers, who might as well buy wood or coal ashes as those burned from tang. This has not been clear to the producers, which is only natural when it is remembered that there has not hitherto been produced sufficient ashes to supply the demand, and the product, therefore, has been partly bought without criticism by the manufacturers.

CURING METHODS AND MARKET PRICE.

Besides being mixed with "tang," the ashes are often found to be adulterated by sand and stone. Alga ashes are also of little value when decayed or rotten weed is used or when the weed has been too long exposed to rain before dried, or when the fire is extinguished by salt water. The best product is obtained, as a rule, from the cut weed, but weed that is washed ashore is often very good, especially early in the year—say, in April and May.

The weed must be fresh dried and burned on rocky ground. Should it rain the weed must be gathered in a heap and covered. Along with

the dry weed must be placed some that is damp, to prevent the fire from breaking through, so that no more air is admitted than necessary to promote the carbonization. The burning should take place on rocky ground, so that the ashes will not become polluted with sand and gravel.

We strongly recommend seaweed burning and careful handling of the product, because our country can not afford to lose any of its industries. Now that the Japanese have also entered this field, the price of iodine in November, 1905, fell from 29.65 kroner to 16.95 kroner per kilo (\$3.61 to \$2.06 per pound). What difference the price of the prepared article has on the maintenance of this industry one can understand.

COST OF MANUFACTURE—DEALING WITH JAPANESE COMPETITION.

The price is governed by several factors. What we can do is to produce good and sufficient raw material for the benefit of our maritime population and our manufacturers by careful handling of the weed. As an example of how necessary it is and how the question of success or failure is dependent on the quality of the raw materials, it can be mentioned that of two competing manufacturers in this country in the production of the same amount of goods, one used 420 tons of ashes, at a cost of \$13,060; the other used 286 tons, at a cost of \$8,040. This difference of \$5,020 in cost of manufacture represents a direct loss for Norwegian industry, and therewith for our nation; loss caused by carelessness and want of judgment. If the struggle for maintaining Norwegian and Scotch industries stands face to face with Japan—and it will come, and come soon—the best chances for success lie with the factory producing the most economically.

Now the several dealers contemplate buying only according to analysis, making sure that they pay for only good wares. That something must be done to prevent adulteration all are agreed, both the Norwegian producers and the agents for Scotch manufacturers, who are all located in Stavanger and have subagents round about who buy the greater part of ashes produced on the Norwegian coast.

If the European production of iodine must cease, the burning of seaweed ceases with it. From certain districts where particularly poor ashes come several manufacturers have already withdrawn. The time is not far distant when all inferior weed burning must cease, because buyers can not be found for the poor quality. From the time that all ashes are to be analyzed, accepted, and paid for according to analysis, the poor and adulterated article will no longer be received.

The Japanese have cheaper and better raw materials, cheap coal, and anyone can judge if we are right when we say that this whole Norwegian industry stands in danger of collapse. To prevent this we Northmen must get together. We therefore sum up our remarks thus: Take up seaweed burning along all the coasts wherever the weed is found, but be careful with its treatment.

IODINE IN JAPAN.

PRODUCTION, PRICES, AND SHIPMENTS.

A report from Consul-General Henry B. Miller, at Yokohama, says that there is about 110,000 pounds of crude iodine manufactured in Japan on an average for export each year. The price ranges from

3.10 yen (1 yen=49.8 cents) to 5.45 yen per pound. At present the price is 3.65 yen or about \$1.32. The bulk of shipments goes to England, very little going to the United States. The Japanese use divers to gather the seaweed from which it is made. Concerning the process of making after burning, the crude method in use for ages continues, and the real difference in cost of production is probably due entirely to the difference in cost of wages. It is made in three places, Osaka, Hayama, and Tokyo. Japanese dealers assert that the price of iodine is regulated in London by a convention in the form of a practical trust. The cheapest and principal place of the world's production is in Chile, South America, and this convention regulates the price by control of the product from that country. The convention does not contest the market for the Japanese product so long as the amount is not too large. When the export from Japan threatens to grow heavier the price in the London market is lowered and the Japanese producer closes down his plant. As these institutions are small and inexpensive they can afford to close down and wait for a rise in the market, when they start up again. The real competition is the product from Chile.

NORWEGIAN PAPER INDUSTRY.

METHODS OF MANUFACTURE—LOW WAGES FOR SKILLED LABOR.

Consul-General Henry Bordewich, writing from Christiania, says that the modern paper industry of Norway may be reckoned to date from the same time as the chemical pulp industry, about the year 1880.

Although writing paper has been manufactured in Norway for one hundred years, the quality of the article produced is not of the best, and the finer grades of such papers are therefore still articles of import. Rags are largely used in the mills producing writing paper. It is in the manufacture of printing, news, and wrapping papers that the Norwegian mills excel. The wood employed in the mills is mostly spruce. Connected with the paper mills is generally found a sawmill, where the butts of the large trees are sawed to lumber, while the tops, branches, and small trees which have been cut to thin out the forests go to the pulp and paper mills.

Both mechanical and chemical pulp are used by the Norwegian paper mills. The pulp is reduced to an even, consistent mass, containing about 60 per cent of water, and conducted into a receptacle where sizing is added; thence through the paper machine, where it is evenly distributed in a thin layer on a wide, endless belt, which passes through a system of hollow horizontal rollers. These rollers are heated by steam; they are placed side by side, with very little space between, and turn on their own axis on a vibrating metal frame. The belt holding the layer of pulp is carried along by the rollers, and the thin mass dries quite rapidly. The width of the paper is determined by dividing belts, placed on each side of the main belt or bed, holding the unfinished paper. The dividing belts may be set apart for any desired width of paper. When the paper is dry, it is finally passed between two cloth-covered rollers, where it is given finish and luster; thence between another set of warmed rollers, which completes the operation.

As the paper escapes it is received on a revolving reel and cut in the desired lengths.

Trial has been made with Canadian spruce, which was sent over here and used in a Norwegian paper mill for experimental purposes. The Norwegians claim that their own wood is superior, for the reason that it holds less resin than the Canadian. The mills at Skien employ about 1,000 hands, have 8 machines, and turn out some 35,000 tons of paper annually. A reel of their newspaper sometimes contains as much as 7,500 running meters (meter=39.37 inches), and weighs nearly a half a ton. The wages of the laborers vary from 40 cents to \$1.10 per day. Norway possesses a number of valuable water powers, well distributed through the timbered districts. Transportation facilities are good and wages low. The paper machines used are partly of home manufacture and partly imported from Germany and other countries. One, called "machines continues," of Belgian make, appears to be in favor, used in connection with separate surfacing and cutting machines.

EDUCATION OF MILLERS.

RUSSIA ADOPTS GERMANY'S GOOD EXAMPLE.

Consul J. I. Brittain writes from Kehl that the large exportation of wheat from Russia to Germany and other continental countries is causing the Russian millers to pay more attention to the education of their sons in the art of scientific milling. The consul continues:

Recently several milling schools have been established in Russia, modeled largely after the more successful schools in Germany, for the education of millers. The course of instruction, besides the Russian language, includes the following subjects: Mathematics, physics, electro-technics, technology, chemistry, machine building, milling, mill engineering, drawing, and bookkeeping. Several visits to the mills are made each year in order to enable the pupils to see the practical working, and thus obtain a knowledge of milling. The schools are divided into three grades or classes, and the pupils spend one year in each class, the complete course extending over three years. Pupils who attend a milling school for two years are only obliged to serve the same period in the army, instead of serving the customary four years, while students who have passed through the complete course are obliged to serve only one year in the army. In Germany one seldom sees a town with from 2,500 to 4,000 population without a successful flour mill, and largely because they teach milling according to present-day methods.

MODERN FLOUR MILL IN CHINA.

A very large flouring mill is being erected at Hongkong, China, and it is thought that the mill will be in working order in about 18 months. The capacity will be 8,000 sacks of flour per day. The mill will be run by electricity, and the water running the dynamos will be stored in a reservoir containing 450,000,000 gallons. This water is fed over a fall at 325 feet from the mill. There will also be an auxiliary petro-

leum engine set up in case of any failure or disturbance of the electric power. The dynamos will develop 600 horsepower. The command of such cheap power will considerably reduce the cost of production and enable the mill to compete with foreign mills. About 300 Chinese will be employed. The mill is expected to supply the trade at Hong-kong and later the coast and inland trade.

POWER PROPOSITIONS.

CHEAPER LIQUID AIR OUTLOOK.

IT WILL COST PROBABLY ONLY ONE CENT PER CUBIC FOOT.

Reduced cost of liquid-air production is indicated by an article in the London Times. Recent experiments in England of an invention by Mr. Knudsen, a Dane, furnished liquid air at one-sixth of the present market price, and give promise of an ultimate low price of a fraction over 2 cents per gallon. The result is secured by purely mechanical means, without an atom of added chemicals. Atmospheric air is first purified and then compressed by stages to 2,500 pounds to the square inch. It is finally reduced to 125 pounds to the square inch, which then cools and liquefies the high-pressure air.

The oxygen gas produced by separating the nitrogen from the liquid air is claimed to be purer than by the old method, and can be supplied in the liquid as well as the gaseous form. One gallon of liquid air equals approximately 128 cubic feet of oxygen gas, which retails at 6 cents per cubic foot. The new price is 1 cent. Liquid air has been successfully used in coal mines as an explosive, being quite safe where fire damp and other explosive gases exist. Liquid oxygen is also used for welding steel pipes, boiler shells, and plates for shipbuilding instead of riveting.

That oxygen and nitrogen can be separated from liquid air and sold retail at \$1.20 per gallon shows great commercial possibilities. The use of nitrogen for agricultural purposes opens yet another field. The maturing of liquors will be helped by liquid air, as also the preservation and purification of milk. As a motive power its use is considered to be quite practicable for small powers. The British Government is already carrying out a number of experiments with a view to the utilization of liquid air for various purposes.

ELECTRICAL PROJECT.

NOVEL PLAN TO RID LONDON OF SMOKE.

According to Consul F. W. Mahin, of Nottingham, Arnold Lupton, member of Parliament for one of the Lincolnshire districts, has conceived a giant project, of which the result would be to rid London of its smoke fog and make it one of the sunniest cities on the globe. Mr. Lupton is quoted as confident that it "would be the most beautiful city in the world."

Mr. Lupton's plan contemplates the use of electricity for power, lighting, heating, and cooking in London, and bringing the electric

energy from the coal fields of the Midlands, thus doing away with the smoke producers in the metropolis. It is stated that Mr. Lupton "took an active part in the preparation of a plan for harnessing the waters of Niagara to the extent of 120,000 horsepower," and that his present project is backed by engineers of distinction. He estimates that the smoke nuisance damages London every year fully \$10,000,000, not to mention the incalculable personal discomfort which it causes. The success of his project would not only abate this intolerable nuisance, but would also, it is calculated, furnish a cheap substitute for the present source of light, heat, and power. Mr. Lupton is thus quoted:

What I propose is to use a high-tension current of 60,000 volts and to bring the electric energy from the Midland coal fields, 120 miles away. If London were supplied with electric generators of, say, 1,000,000 kilowatts average load, the greater part of the railways, tramways, and factories could get their electric lighting and power, and the bulk of the houses be warmed and the cooking done by electric energy. The current could be delivered in London in bulk at 1 farthing (half a cent) per unit, and therefore it could be sold at 1 penny (2 cents), and even less for large quantities.

It is proposed to construct a plant, as a beginning, to be enlarged when needed, to cost about \$17,000,000. The railways may oppose this project, for it would mean a heavy annual loss to them in freight receipts from carrying coal to London. But manifestly the Midland coal fields would offer it every encouragement.

GAS COAL ECONOMY.

SUCTION ENGINES OPERATED WITH GREAT SAVING OF FUEL.

The power efficiency of certain soft coals when used in the gas producer plant is two and one-half times greater than when used in an ordinary steam boiler plant. This is shown by Geological Survey tests, which also develops that the softest grades of bituminous coal and lignite are equal in power production with the best grades, even surpassing anthracite for some purposes. The peat of New England may also be utilized in the gas producer plant and save the factories there one-third of the \$50,000,000 annual coal bill for manufacturing purposes. Authorities in the Geological Survey claim that the use of producer gas would add hundreds of years to the duration of the American coal reserve.

Suction gas is a mixture of water gas (H) and carbonmonoxide (CO), the former being produced by decomposition of overheated steam (H_2O) into hydrogen (H) and oxygen (O), the latter being generated by the combustion of coal (C) under a lack of air. This mixture is sucked through the apparatus by the gas engine during the loading stroke. Mr. Dowson was the first to bring out this mixture of producer gas. Further experiments in Belgium under a brake test with an inferior quality of coke, containing about 20 per cent of moisture and ash, showed a consumption of fuel of only $1\frac{1}{4}$ pounds per boiler horsepower per hour. Now some 300,000 horsepower are worked with suction gas in all parts of the world.

RUSSIAN SELLING AGENCIES.

ZEMSTVO EXHIBITION AND SALES DEPOTS RECOMMENDED.

British Consul-General Smith, in his report from Odessa, has a word of recommendation for the Zemstvo depots, which do not appear to be taken full advantage of in seeking Russian trade.

About ten years ago a certain Zemstvo began the movement by establishing stores for showing and selling agricultural machinery and implements, fertilizers, etc. These stores are semiofficial institutions; they only collect a small commission for expenses and are not allowed to make profit. Should a store after two or three years trial not cover expenses it is closed, and the goods on hand are either returned or sent to another store, as agreed. Many of them hold large stores of the above-mentioned articles, and generally of things needed by landowners, and especially by peasant proprietors. Qualified agriculturists are attached to these Zemstvos in order to teach what appliances, fertilizers, etc., are best suited to the local conditions.

Foreign goods are only received on consignment; the great point of the Zemstvo agency is that you are sure to get your goods back or money.

GERMAN METHODS.

PERSISTENCY IN THE MARKETS OF RUSSIA.

A recent report from the British consul at Odessa, printed in Nottingham newspapers and supplied by Consul F. W. Mahin, describes German commercial methods in southern Russia.

It seems that in the sale of agricultural machinery there Great Britain now leads, but German firms are pressing a dangerous competition. They have the business thoroughly organized, with a complete system of agencies, of which the head is in Odessa. In addition to agents in all agricultural centers, the Germans use many commercial travelers. They also employ commissioners—local men, who are constantly traveling about for some purpose, perhaps buying grain, and are therefore on intimate acquaintance with the farmers. Among these they successfully press the sale of German machinery. Thus organization and persistency have created a large market for German agricultural machinery; but, in addition, the consular report says, the Germans profit by “the introduction and advertisement of novelties. The Russian likes novelties, however trifling, and even the alteration of the name, for instance, under which a machine or implement is known, or some insignificant change in construction, which the German takes good care to point out, may facilitate a purchase which might not have been made if the old designation or style of machine or implement had been offered.”

This is but one instance in very many where Germany is displaying a remarkable degree of push and enterprise, indicating a systematic, aggressive movement along the whole industrial line.

COMMERCIAL EDUCATION.

UNITED STATES BEHIND EUROPEAN COUNTRIES IN THAT RESPECT.

Frank V. Thompson, who is to be the principal of Boston's new Commercial High School, has been spending several months in Europe in making a thorough examination of the commercial schools in Germany, Italy, Switzerland, and other countries. The Boston Transcript prints a very interesting statement from Mr. Thompson of the results of his investigations in Europe.

Mr. Thompson says that the commercial schools in Italy, Switzerland, Austria, Germany, Belgium, and France have all past the experimental stage and are component parts of the educational scheme of those countries and are considered especially valuable. In Italy the Government usually encourages the extension of such instruction by granting large subsidies. The same is true of Switzerland, but to a greater extent. In that country there is scarcely a city of even moderate size which has not a flourishing school of commerce. The town of Neuchâtel, which has less than 18,000 inhabitants, has a commercial school of 700 boys and young men. The fine building, with its splendid equipment of laboratories, is superior, Mr. Thompson says, to any school structure in Boston, and he was surprised to find about two dozen American boys in that school receiving their education for business careers in the United States. Austria has a very complete system, Vienna alone having fifteen lower commercial schools and four higher schools of commerce. There were 1,200 young men in one of these schools visited by Mr. Thompson.

GERMANY TAKES THE LEAD.

He says that Germany usually takes the lead in the matter of commercial education. There are four kinds of commercial schools in that country, all under control of the State. One kind gives an elementary training for business to boys up to the age of 16 or 17. Then there is a higher kind of commercial training, and then, again, commercial universities of the same grade as the usual German universities. The fourth kind of commercial education is the apprentice institution. Boys are not turned adrift educationally at the age of 14, as is the case in this country. The German Government demands that all the apprentices of whatever occupation shall attend class instruction for ten to twelve hours a week for three years. This is not done by haphazard evening instruction, but in regular schools during the daytime.

SCHOOLS IN FRANCE AND ENGLAND.

France also has a fine system of commercial schools. In the corridor of the High School of Commerce in Paris can be seen the purpose of the school stated in these words: "The High School of Commerce is intended to complete by means of higher studies the instruction given in special educational establishments, and to impart to young men leaving grammar schools and other institutions the technical knowledge necessary in managing business, whether trade, manufacturing, or

banking. The High School of Commerce also trains candidates for the consular service, capable of worthily representing France in international relations."

England has no schools of commerce in the strict sense. The realization of the need, however, is growing. The invasion of German young men, well trained and capable, into the business houses of England is forcing a recognition of the desirability of a proper business education. Germany has put her millions into technical schools, and has no problem, Mr. Thompson says, of the unemployed. Instead, there is a scarcity of labor. He says that the United States is not making "our weight count commercially as we should."

The new High School of Commerce in Boston is a necessary outgrowth of the demands of the times. Whatever is good and worthy in the foreign systems is to be incorporated in this school.

PACKING FOR EXPORT.

ADMONITION TO AMERICANS FROM CENTRAL AMERICA.

Consul J. C. Caldwell, of San José, furnishes an admonition to American exporters as to methods of packing. He writes:

American exporters can not be too careful in regard to the packing of their products. While all packages should be as light as possible, without any undue filling up with dead material—all duties being levied on the gross weight—this light packing must be such as to properly safeguard the goods. Proper packing and credits, such as are freely given by European exporters to trustworthy merchants, are two important "trade agents" for the enlargement of American business in Costa Rica. The prevalence of a general progressive spirit, embracing railways and highways especially, is noted, and as American men and capital will have much to do in the development of the Republic the American exporters and manufacturers should not neglect the opportunities that are offered them.

Consul E. W. Trimmer, writing from Cape Gracias á Dios, Nicaragua, on the same subject, says:

In packing and invoicing goods the European exporter studies more closely the tariff laws and regulations of the country to which he ships than does his American competitor. It is suggested that cans containing fruit, vegetables, meat, butter, milk, etc., for export to the Tropics should be painted, as they are frequently wet by salt water while being unloaded from the ships, and in this damp climate, even under the most favorable conditions, unpainted tins soon rust and their contents spoil.

GOOD GOODS ENTITLED TO GOOD CASES.

While dwelling at length upon the comparatively favorable condition of American trade in British Honduras, and how to still further advance that trade, Consul Avery again calls attention to the poor packing of American goods as compared with the packing of European imports. Years ago, and yearly thereafter, consular and departmental trade reports have called the attention of exporters to this vital point.

It seems strange that so practical a people in all other branches of trade should devote so much time and scientific labor to the production of the most advanced manufactures, in many cases necessarily more or less fragile, and after such achievement turn over the products to some "handy man" for packing, when they should be turned over to the most scientific force in the factory or warehouse. What particular economy is fulfilled in dumping wares, which have been so scientifically produced, in crates, bales, boxes, and barrels and consigning them to transportation companies to be tossed about and broken up in the rough handling to which all exported goods are subjected it would be difficult to say. It is full time that our manufacturers awoke to the fact that for export all their time and labor are more than wasted if the products do not reach their destination in good condition.

PARCELS POST FOR DENMARK AND AMERICA.

Acting Postmaster-General Hitchcock has signed a parcels-post convention with Denmark, to take effect on October 1.

It provides for the exchange and transmission through the postal services of both countries of parcels which weigh no more than 4 pounds and 6 ounces nor measure more than 3 feet 6 inches in length and 6 feet in length and girth combined. The value of the parcels carried is also limited to \$50. Postage must be prepaid in full at the following rates: In the United States, on parcels for Denmark, 12 cents for each pound or fraction of a pound.

In Denmark, on parcels for the United States, 60 ore for a parcel not exceeding 1 kilogram in weight, and 1 krona for other parcels. A delivery charge not exceeding 5 cents in the United States may be collected of the addressees of each parcel. The parcels-post regulations applicable to parcels for Norway apply also to parcels for Denmark. Parcels-post mails for Denmark will be made up at the New York post-office.

AMERICA'S COLONIAL TRADE.

The United States did a business of \$119,304,511 with its outlying possessions during the fiscal year ended June 30. Alaska contributed \$9,208,130 in domestic shipments, a reduction of \$1,490,564, due to the decrease of canned salmon. Alaska purchased from the States \$14,375,275 of domestic merchandise, an increase of \$3,147,656 over 1905.

Hawaiian domestic imports from the States held about even at \$11,771,155, but the raw sugar shipments in return fell off 99,000,000 pounds from the 811,000,000 for 1905, so that the goods invoiced from Hawaii to the States amounted to only \$26,850,463, against \$36,069,109 the year previous.

Porto Rico's trade with the States was \$18,648,991 in purchases and \$19,055,474 in shipments. The Philippines bought \$5,458,867 worth of domestic merchandise and shipped hither \$12,337,927.

TARIFF SCHEDULES.

WORLD'S LEATHER DUTIES.

RATES OF VARIOUS COUNTRIES CLASSIFIED.

WHAT CHARGES AMERICAN GOODS ENCOUNTER IN ENTERING THE
FOREIGN MARKETS.

The following arrangement of the tariff schedules of all countries imposing import duties on leather and its manufactures was prepared by the Bureau of Manufactures, Department of Commerce and Labor. It includes the latest enactments, and in the case of Germany and other countries having general and conventional rates, those are given.

EUROPE.

AUSTRIA-HUNGARY.

[Krone=\$0.203; kilo=2.2046 pounds.]

Tariff No.	Articles.	Unit of quantity.	Rate of duty.	
			General.	Conventional.
828	Cow and horse hide, worked like sole leather (also for transmission belts):			
	(a) In back pieces—		<i>Kronen.</i>	<i>Kronen.</i>
	1. Bark-tanned.....	100 kilos ..	50. 00	45. 00
	2. Mineral-tanned .....	.....do	60. 00	55. 00
	(b) Other (except waste leather)—			
	1. Bark-tanned.....	.....do	43. 00	38. 00
	2. Mineral-tanned.....	.....do	50. 00	45. 00
	(c) Waste leather .....	.....do	35. 00	35. 00
829	Cow and horse hide, not worked like sole leather, dressed or not, but not lacquered:			
	(a) Natural color or dyed black.....	.....do	30. 00	30. 00
	(b) Other.....	.....do	43. 00	43. 00
830	Calf leather, except patent leather:			
	Natural color .....	.....do.....	60. 00	40. 00
	Other .....	.....do.....	60. 00	50. 00
831	Buck, goat, and kid skins, tanned, not dyed, not further prepared.	.....do.....	5. 00	.....
832	Sheep and lamb skins, tanned, not dyed, not further prepared:			
	(a) Split .....	.....do	14. 00	5. 00
	(b) Other .....	.....do	30. 00	5. 00
	NOTE.—Grained and stretched sheep and lamb skins which have not undergone any further process of manufacture are dutiable under No. 332.			
833	Buck, goat, and kid skins, prepared, except glove and patent leather.	.....do.....	60. 00	43. 00
834	Sheep and lamb skin leather, prepared, except glove and patent leather .....	.....do.....	60. 00	43. 00
835	Glove leather of all kinds .....	.....do.....	43. 00	43. 00
836	Patent leather of all kinds:			
	(a) Cowhide leather.....	.....do.....	60. 00	45. 00
	(b) Other.....	.....do.....	60. 00	20. 00
838	Saddlers' and harness-makers' wares, combined or not with other materials:			
	(a) Without component parts of metal, or with fittings, buckles, rings, bars, and other parts of iron and steel (except if nickeled or coated with other metals).	.....do	90. 00	90. 00
	(b) With fittings, buckles, bars, and other parts of brass, nickel, or other base metals, or coated therewith (including those of iron and steel).	.....do	120. 00	100. 00
	(c) With silver, silver-plated, silvered or gilt fittings, buckles, bars, rings, and other metal parts—			
	(i) Harness with fittings, etc., and parts of silver....	.....do	240. 00	240. 00
	(ii) Other.....	.....do	240. 00	180. 00

AUSTRIA-HUNGARY—Continued.

Tariff No.	Articles.	Unit of quantity.	Rate of duty.	
			General.	Conventional.
340	Boots and shoes of all kinds, with or without leather, combined or not with textile or other materials, weighing, per pair:		<i>Kronen.</i>	<i>Kronen.</i>
	(a) More than 1,200 grams.....	100 kilos ..	100.00	70.00
	(b) More than 600 and up to 1,200 grams.....	.....do	125.00	94.00
	(c) 600 grams or less.....	.....do	145.00	106.00
	(d) Slippers and house shoes, without regard to weight..	.....do .....	.....	70.00
341	Gloves of leather (also merely cut out or combined with textile materials), embroidered or not.	.....do	150.00	150.00
344	Articles for technical purposes:			
	(a) Welting leather for boots and shoes; saddle leather cut out for bicycle saddles; rawhide pulleys, not further worked.	.....do	60.00	.....
	(b) Transmission belts, flat; also driving reins—			
	1. Of bark-tanned leather.....	.....do	70.00	58.00
	2. Of oil-dressed or mineral-tanned leather; also of rawhide.	.....do	80.00	68.00
	(c) Transmission belts of leather, round or cornered; also twisted.	.....do	80.00	.....
	Transmission cords of cut leather, not rounded, twisted or not.	.....do	80.00	70.00
	(d) Articles for technical purposes, not specially mentioned, of leather or rawhide, such as traveling buckets, cogged wheels, washers and rings for packing, and the like.	.....do	75.00	.....
	NOTE.—Imports from the United States are admitted into Austria-Hungary at the conventional rates of duty.			

BELGIUM.

[Franc=\$0.193.]

Tariff No.	Articles.	Unit of quantity.	Duties.
48	Hides and skins:		<i>Francs.</i>
	Raw and parchment, including large hides and small skins, green, salted, or dried, raw or unprepared furs, as well as shaved or unseasoned hides (peaux en tripes ou en vert).	.....	Free.
	Goat and sheep skins, tanned with the hair, and kid skins, tawed with the hair.	.....	Free.
	Skins, dyed, varnished, lacquered, or morocco leather, and prepared furs.	100 kilos ..	30.00
	Hides and skins otherwise prepared, including more especially tanned and curried hides and skins. (Sheep skins called straw skins (peaux paille) are likewise included in this sub-division.)	.....do	15.00
	Hides and skins, manufactured, comprising articles of leather and skins which are not considered as Morocco-leather wares, such as shoemakers' wares and gloves or which, owing to their destination, can not be classed under a more favorable head of the tariff (Machines, Implements, and Tools, etc.).	ad val	10 p. ct.
34	Morocco-leather wares. (This number includes articles manufactured by leather-ware makers (maroquiniers), and the principal component part of which is skin (moroccoed or not), such as portfolios for lawyers, blotters, cases for physicians (not including the surgical instruments which they may contain), cases or traveling necessities, hand bags; small and medium sized valises; purses, albums, pocketbooks, office portfolios, etc., most of which were formerly classed in Hides and skins, manufactured).	ad val	15 p. ct.

DENMARK.

[Krone=\$0.268; pund=1.102 lb.]

Tariff No.	Articles.	Unit of quantity.	Rate of duty.
64	Boots and shoes (other than wooden clogs), combined with leather, with tops or uppers wholly or partly of silk (borders are not considered in classification).	Pund	<i>Krone.</i> 0.96
65	Other.....	.....do .....	.64

DENMARK—Continued.

Tariff No.	Articles.	Unit of quantity.	Rate of duty.
	Hides, skins, and leather:		<i>Krone.</i>
211	Undressed, and leather for covering hampers and trunks		Free.
	Dressed:		
212	Dyed, blackened, smoothed, varnished, lacquered or bronzed, gilt, silvered, with embossed or printed figures or similar ornaments; shagreen, cordovan, morocco, and Russian leather; parchment and skins for furriers.	Pund .....	.24
213	Other.....	do .....	.16
	Wares of hides, skins, and leather:		
214	Gloves, even combined with other materials, sewn or cut out.....	do	1.44
215	Other, not mentioned	do .....	.82

FRANCE.

[Franc=\$0.193.]

Tariff No.	Articles.	Unit of quantity.	Rate of duty.	
			General.	Minimum.
476	Skins and hides, prepared:		<i>Francs.</i>	<i>Francs.</i>
	Merely tanned or tawed—			
	Goat, sheep, and lamb skins.....	100 kilos ..	15.00	10.00
	Other, including those smoothed—			
	Whole hides	do	50.00	25.00
	Cowhides, squared (croupions).....	do	60.00	32.00
	Parings and scrapings	do	40.00	18.00
	Curried—			
	(a) Calfskins, varnished or ready to be varnished, but not having received any of the preparations mentioned in the following paragraph.	do	40.00	25.00
	(b) Goat, kid, sheep, lamb, and calf skins, in their natural color, or dyed, blackened by steeping or scrubbing, smoothed, shagreened, checkered, morocco, glossed, or dull.	do	90.00	60.00
	(c) Cowhides and other large hides, dyed or blackened by steeping or scrubbing, smoothed, shagreened, checkered, printed, morocco, glossed, or dull.	do	70.00	50.00
	(d) Hides squared, for fine saddlery, pigskins, in their natural color, black, brown, or otherwise dyed.	do	75.00	40.00
	(e) Sheepskins, prepared in Europe or not, of raw skins of transmarine origin, neither scraped, dull dyed, nor smoothed, for shoe lining, etc.	do	70.00	45.00
	Varnished	do	190.00	125.00
	Chamois or parchment, dyed or not, tawed dyed.....	do	74.00	60.00
	Other, not mentioned, not dyed	do	60.00	40.00
477	Imitation leather	do	85.00	25.00
	Manufactures of skins or leather:			
478	Soles, cut out, of beaten and smoothed leather, also heels. Uppers of top boots, boots, shoes, vamps, galoshes (cambered or not), and quarter pieces of calf, cow, horse, goat, or kid leather or skin:	do	80.00	50.00
479	Not varnished	do	175.00	125.00
479 bis.	Varnished	do	275.00	175.00
480	Top boots.....	Pair	2.50	2.00
481	Boots for men and women	do	2.50	1.50
482	Shoes	do	1.00	.75
484	Gloves:			
	Of lamb or calf skin—			
	Simply sewn.....	12 pairs ..	1.00	.50
	With pricked seam (piqué).....	do	1.50	.75
	Of goat skin or kid—			
	Simply sewn.....	do	2.00	1.00
	With pricked seam (piqué).....	do	2.50	1.50
485	Articles of saddlery, fine (other than saddles)	100 kilos..	220.00	180.00
486	Saddles:			
	For men	Each	15.00	10.00
	For women	do	18.00	12.00
487	Harness-makers' wares	100 kilos..	60.00	50.00
488	Transmission belts, etc., leather hose, and other articles of leather or skin for machinery.	do	100.00	60.00
489	Sheets and strips of unscraped leather for cards.....	do	70.00	40.00
490	Trunks of wood or pasteboard, covered with leather	do	74.00	60.00
491	All small articles of morocco or other leather:			
	Pliable.....	do	250.00	200.00
	Hard.....	do	200.00	150.00
	NOTE.—Leather and leather manufactures imported from the United States are subject to the general rates of duty.			

GERMANY.

[Mark=\$0.238.]

Tariff No.	Articles.	Unit of quantity.	Rate of duty.	
			General.	Conventional.
CHAPTER VI.—Leather and leather wares, furriers' wares, and manufactures of gut.				
A.—LEATHER.				
544	Half or entirely dressed sheep, goat, lamb, or kid skins, without the hair, not dyed nor further prepared, split or not. Leather, half or entirely dressed, whether prepared or not, not otherwise mentioned:	100 kilos ..	Marks. 8.00	Marks. 2.00
545	Of a net weight of more than 3 kilos each piece—			
	Entire hides or half hides, with the heads, necks, bellies, and hoofs unseparated; head, neck, and belly pieces and hoofs, as well as horsehide, without regard to the weight of the pieces.	.....do	30.00	30.00
	Pig leather, without regard to the weight of the pieces.	.....do	30.00	18.00
	Bend leather .....	.....do	36.00	33.00
	Leather, including bend leather, of a net weight of more than 3 kilos per piece, for the manufacture of driving belts, with permit and under control.	.....do		22.00
546	Of a net weight of from 1 to 3 kilos, each piece .....	.....do	40.00	
	Calf, natural color (natural brown) .....	.....do		25.00
	Other calf .....	.....do		40.00
547	Of a net weight of less than 1 kilo, each piece .....	.....do	50.00	
548	Glove leather of all kinds .....	.....do	36.00	
549	Dressed goat and kid leather, with the exception of glove leather and varnished leather.	.....do	30.00	
550	Dressed sheep and lamb's leather, with the exception of glove leather and varnished leather.	.....do	36.00	
551	Parchment; also "transparent" leather and drum leather..	.....do	18.00	
552	Varnished (lacquered) leather of all kinds.....	.....do	50.00	
553	Worked (tanned, dyed, etc.) fish or reptile skins.....	.....do	50.00	
554	Artificial leather (entirely or partly of compressed leather waste).	.....do	30.00	
Notes to Section A.—(1) Half or entirely dressed calf skins, cattle hides and the like, with the hair, for use in the manufacture of boot uppers, trunk-maker's wares, etc., will pay duty as leather.				
(2) Cuttings and strips of leather which have been subjected to further manufacture by gluing or pressing together or by cutting out ornamentations or holes, or by stitching, sewing, etc.; also cuttings or strips of leather prepared for special purposes by stamping or cutting out, are subject to duty as leather wares, except stamped drum leather, to which alone the tariff rate of No. 551 applies.				
B.—LEATHER WARES.				
Boots and shoes of leather of all kinds, including those made from hides with the hair still on and those made from fish or reptile skins:				
555	With soles of wood.....	.....do	30.00	
556	With soles of other materials—			
	Weighing more than 1,200 grams per pair.....	.....do	85.00	60.00
	Weighing more than 600 and up to 1,200 grams per pair.	.....do	120.00	80.00
	Boot uppers of leather of all kinds with elastic insertions, without regard to weight.	.....do	120.00	80.00
	Weighing 600 grams or less per pair.....	.....do	180.00	90.00
	Slippers and house shoes, without regard to weight ..	.....do		60.00
Notes.—(1) Linings, trimmings, and ornaments of all kinds (buckles, bows, tassels, embroideries, laces, etc.), of other materials, including silk, but not including fur, do not affect the tariff treatment.				
(2) The following are to be treated as slippers and house shoes: Shoes which give no support to the instep or the heel, and are not in any other way (e. g., by lacing, buttons, or elastic sides) adapted for closely fitting the foot. The conventional duty is also applicable to slippers and house shoes with a heel piece, but not to those with a raised heel.				
557	Driving and transmission belts of leather of all kinds as well as of raw hide (without the hair), with or without layers of coarse textile materials or felt.	.....do	60.00	50.00

TARIFF SCHEDULES.
GERMANY—Continued.

Tariff No.	Articles.	Unit of quantity.	Rate of duty.	
			General.	Conventional.
	CHAPTER VI.— <i>Leather and leather wares, furriers' wares, and manufactures of gut</i> —Continued.			
	B.—LEATHER WARES—continued.			
558	Sticks ("stöcke"), riding whips, and the like, of animal sinews, whether combined or not with other stuffs, so far as not chargeable with higher duties as a consequence of such combination:		<i>Marks.</i>	<i>Marks.</i>
	Not varnished.....	100 kilos ..	30.00	.....
	Varnished	do	70.00	.....
559	Clothing of leather:			
	Lined with textile materials.....	do	250.00	.....
	Other	do	80.00	.....
560	Saddler's and trunk maker's wares, as well as other wares not separately mentioned, of leather of all kinds, raw hide (with or without the hair), parchment, bladder, gold beater's skin, or fish or reptile skin, or entirely or partly covered with such materials; also saddler's and trunk maker's wares of coarse vegetable textile materials or of the rope-maker's wares mentioned under Nos. 484 or 485, or wares entirely or mainly covered with such materials; all these so far as not chargeable with higher duties by reason of their combination with other materials, not belonging to the classes of paper and paper wares entirely or partly covered with leather, included under Nos. 667 to 669:			
	Thongs for hunting whips	do	a 65.00 b 80.00	50.00
	Sewing straps	do		50.00
	Straps	do		50.00
	"Flortelriemen" (lanières pour continues)	do		50.00
	Peckers	do		50.00
	Leather laces	do		50.00
	Other articles—			
	Of a net weight of 2 kilos and over, each article—			
	Harness for horses ..	do		50.00
	Card backs, card bends (card silvers), sheet for stripping rollers, sheets and strips for shuttle drivers.	do		50.00
	Sliders	do	50.00	
	Other	do	65.00	
	Of net weight less than 2 kilos, each article—			
	Harness for horses	do	65.00	
	Card backs, card bends, sheets for stripping rollers, sheets and strips for shuttle drivers.	do	65.00	
	Sliders	do	65.00	
	Other (including leather hangings without regard to weight).	do	80.00	
	In combination with mountings or fastenings of precious metals, without regard to the weight of the articles.	do	120.00	120.00
	Embroideries on leather	do	120.00	90.00
	Note.—Combination with mountings or fastenings of gilt or silvered common metal or alloyed common metal does not vary the tariff classification.			
	Trunk maker's wares of waterproof material are not dutiable under No. 560, but under No. 521 or 522, according to degree of preparation.			
561	Glove leather cut out or stamped for gloves.....	do	150.00	125.00
562	Gloves entirely or partly of leather, excepting those covered or lined with fur, and excepting also padded fencing gloves (which are treated as saddler's wares).	do	200.00	125.00
	Note.—Gloves entirely or partly of leather with cuffs of textile material sewn on are classed as sewn articles of such textile material.			
569	Used-up pieces of leather and leather ware; also other leather waste (ground up or not), provided that the use thereof as leather or leather ware is precluded by their condition.	do	Free.	Free.
	NOTE.—Imports from the United States are admitted at the conventional rates of duty.			

a Of a net weight of 2 kilos or more per piece. b Of a net weight of less than 2 kilos per piece.

GREECE.

[Oke=8.3714 lbs.; drachma=\$0.193.]

Tariff No.	Articles.	Unit of quantity.	Rate of duty.	
			General.	Conven- tion.
	I.—Hides and skins, dressed, in pieces.		<i>Drachmas</i>	<i>Drachmas</i>
111	Hides or sole leathers, in small or large pieces; white cowhide.	100 okes ..	100	.....
112	Calfskin, dyed or not; morocco leather; goat, ram, hare, beaver, and sheep skins, dyed or not; shagreen; Russian leather, and cowhide, dyed or varnished.	.....do ..	250	.....
113	Varnished leather and camels' hides.....	.....do ..	250	.....
114	Skins of young calves and kids, skins of muskrats and other rare animals not specially designated.	.....do ..	250	.....
	II.—Boots and shoes.			
115	(a) Boots and shoes and slippers of all shapes and of all kinds for men, women, and children.	Oke.....	8	.....
	(b) Coarse boots and shoes for laborers, with thick wooden soles.	.....do ..	2	.....
116	Shoes and slippers of woolen, linen, or cotton tissues, including felt.	.....do ..	10	.....
117	Shoes and slippers with silken or other embroidered tissue, or with tissue interwoven with silver or gold.	.....do ..	30	.....
	III.—Various leather articles.			
118	Sword belts, chin straps, and all leather articles for sporting or military purposes.	100 okes ..	480	.....
119	Leather bands for machinery and linings for hats.....	.....	Free.	.....
120	Leather bottles, stitched, new or not.....	100 okes ..	20	.....
121	Piping, knapsacks, bellows for domestic use, children's satchels, portfolios for offices.	.....do ..	100	.....
122	Saddles, in general	Each	15	.....
123	Other harness-makers' wares (harness, holsters, etc.).....	Oke	3	.....
124	Small leather wares:			
	(a) Cases ("étuis"), portfolios of all kinds, notebooks, pocketbooks, watch chains, and other small articles of all kinds of leather.	.....do ..	10	.....
	(b) Narghileh tubes.....	.....do ..	5	.....
125	Leather gloves, in general, without fur.....	Pair	1	.....
126	Traveling bags:			
	(a) Plain valises of ox, cow, calf, or morocco leather, not containing toilet necessaries.	Oke	2	.....
	(b) Ditto, with metal ornaments, or of finer leather.....	.....do ..	6	.....

ITALY.

[Lira = \$0.193.]

Tariff No.	Articles.	Unit of quantity.	Rate of duty.	
			General.	Conven- tional.
199	Hides and skins:			
	(a) Raw, green, and dry: By the above are understood hides and skins which have not undergone any tanning process, but are merely dried, or, at most, have been treated with ashes or salted for preservation.		<i>Lire.</i>	<i>Lire.</i>
	1. Unfit for furriery.....	.....	Free.	Free.
	2. Fit for furriery.....	.....	Free.	Free.
	(b) Tanned with the hair on	100 kilos ..	60.00	.....
	(c) Tanned without the hair and unfinished:			
	1. Of sheep and goats.....	.....do ..	25.00	.....
	2. Other .....	.....do ..	25.00	.....
	Other, whole.....	.....do ..		25.00
	(d) Tanned without the hair and finished:			
	1. Kid and lamb skins for, gloves .....	.....do ..	20.00	.....
	2. For soles .....	.....do ..	45.00	.....
	3. Other .....	.....do ..	70.00	70.00
	(e) Patent leather .....	.....do ..	90.00	90.00
	(f) Cut out:			
	1. For boot uppers, vamps, etc.....	.....do ..	a+20 p.c.	a+15 p.c.
	2. For hat bands.....	.....do ..	a+50 p.c.	.....

aDuty on leather, according to kind.

ITALY—Continued.

Tariff No.	Articles.	Unit of quantity.	Rate of duty.	
			General.	Conventional.
			<i>Lire.</i>	<i>Lire.</i>
200	Fleshy residues and parings of skins	100 kilos ..	Free.	.....
202	Harness.....	do	90.00	.....
203	Saddles	Hundred ..	1,500.00	1,200.00
204	Gloves of all kinds of skins, even merely cut out.....	100 pairs..	20.00	.....
205	Boots and shoes of all kinds	do	200.00	.....
	Boots and shoes of all kinds of leather or stuffs, except silk and velvet.	do .....	.....	100.00
206	Transmission belts for machinery, finished.....	100 kilos ..	100.00	85.00
207	Manufactures of skins tanned without the hair, not separately mentioned.	do	120.00	100.00
	NOTE.—Imports from the United States are admitted at the conventional rates of duty.			

ROUMANIA.

[Leu=\$0.193.]

Tariff No.	Articles.	Unit of quantity.	Rate of duty.	
			General.	Conventional.
			<i>Lei.</i>	<i>Lei.</i>
59	Buffalo and ox hides, calf, sheep, lamb, goat, kid, horse, and pig skins, with or without the hair, and all kinds of skins other than furs, fresh or salted.	100 kilos ..	4.00	.....
60	Do., dried or treated with ashes.....	do	8.00	.....
61	All kinds of tanned hides for sole leather or straps.....	do	120.00	.....
62	Back pieces, tanned for sole leather, and all other hides cut from the back.	do	180.00	.....
63	Hides of large cattle (toval), tanned, so-called "white" hides, hides of young cows (teletins), calf hides (spalt, vax), for all purposes and all tanned hides of large cattle, except varnished.	do	125.00	125.00
64	Tanned sheer skins, lamb, pig, and goat skins, chamois leather, morocco, sheep leather in any form.	do	140.00	140.00
	Kid leather.....	do .....	.....	120.00
65	Fine leather for gloves, buckskin, vellum, patent leather of all kinds and colors, and leather not otherwise specified.	do	200.00	175.00
66	Pieces of tanned hides of all kinds, measuring not more than 5 centimeters either way.	do	10.00	.....
67	Leather parings and degreas	do	6.00	.....
	NOTE TO Nos 61-67.—The method of tanning does not affect the tariff classification			
68	Transmission belts, flat or round.....	do	160.00	150.00
69	Harness and accessories for same.....	do	200.00	.....
70	Saddles and accessories for same, leather whips for riding and driving.	do	250.00	.....
71	Leather wares of all kinds for personal use, traveling articles, cases, portfolios, and school satchels, manufactured from the leather enumerated in No. 63, or made chiefly of leather.	do	220.00	.....
72	The same articles manufactured from leather enumerated in No. 64.	do	280.00	.....
73	Articles of fine leather, such as hand bags, purses, cigar cases, and all other articles manufactured from the kinds of leather enumerated in No. 65 (except gloves), even combined with other common materials.	do	250.00	250.00
74	Leather articles of all kinds, combined with fine materials or precious metals.	do	500.00	500.00
75	Boots and shoes, finished or merely cut out, of the kinds of leather enumerated in No. 63.	do	500.00	.....
76	Do., of those enumerated in No. 64.....	do	650.00	.....
77	Do., of those enumerated in No. 65.....	do	800.00	.....
78	Boots and shoes, composed of different kinds of leather (dutiable as the leather with the highest rate of duty).	do .....	.....	.....
79	Boots and shoes of leather combined with wool, cotton, or linen material.	do	650.00	.....
80	Boots and shoes of silk combined with leather.....	do	800.00	.....
81	Leather gloves of all kinds, even trimmed with fur or lined.	Kilo	12.00	.....
	NOTE.—Imports from United States to Roumania are subject to general rates of duty.			

NETHERLANDS.

Tariff No.	Articles.	Unit of quantity.	Rate of duty.
82	Hides, skins, and leather: Saddler's, shoemaker's, and trunk maker's wares, and all other articles of leather not specially classed.	.....	5 p. ct. ad val.
	Furs and peltries prepared, including skins prepared with the wool.	.....	5 p. ct. ad val.
	Hides, skins, and leather.....	.....	Frec.

PORTUGAL.

[Milreis (1,000 reis) = \$1.080.]

Tariff No.	Articles.	Unit of quantity.	Rate of duty.
			<i>Rcis.</i>
28	Hides and skins, raw or prepared, fresh, of asses, goats, horses, sheep and lambs, mules, pigs, and cows and oxen.	Kilo	18
29	Do., raw or prepared, dried.....	do	24
30	Hides and skins, cowhides (vaquetas)	do	120
31	Do., tanned, including sole leather.....	do	300
32	Do., curried, varnished and morocco.....	do	600
33	Do., curried, not elsewhere mentioned.....	do	500
34	Do., raw or prepared, for hats.....	do	10
	Skins with hair, raw or prepared, of animals not mentioned in No. 28.	do	300
35	Skins with hair, even cut up and prepared for working up.....	do	1,200
36	Kid, without distinction of color or finish, and for whatever use.	do	1,000
378	Transmission belts of leather for machinery.....	do	100
433	Gloves of leather, finished or not, up to 30 centimeters in length.	Pair	400
434	Do., above 30 centimeters in length.....	do	600
438	Hides and leather, manufactured, not otherwise mentioned (including ornaments and trimmings).	Kilo	1,200
532	Boots and shoes of leather, also top boots and leggings, of leather, the legs being more than 30 centimeters in length.	Pair	2,500
533	Boots and shoes not elsewhere mentioned, with leather soles	do	1,500
536	Pocketbooks, cigar cases, and purses, except those of gold, silver, or platinum.	Kilo	1,200
538	Bands of leather for hats, not exceeding 8 centimeters in width.	do	150

RUSSIA.

[Poud=36.113 lbs.; funt=0.9017 lb.; ruble=\$0.515.]

Tariff No.	Articles.	Unit of quantity.	Rate of duty.	
			General.	Conventional.
54	Hides and skins, undressed, of bulls, oxen, cows, calves, camels, buffaloes, horses, asses, pigs, skins of fish or of amphibious animals:		<i>Rubles.</i>	<i>Rubles.</i>
	(1) Dry and dry salted	Pood	0.75	.....
	(2) Wet salted	do .....	.40	.....
	Parings of undressed hides or skins	do .....	.75	.....
55	Hides and skins, dressed:			
	(1) Small (except those mentioned in subdivision 2), tanned, dressed with alum, tawed; chamols leather, calf skins; skins of fish and of amphibious animals; tawed thongs, for sewing together the ends of machine belting.	do	18.15	.....
	(2) Morocco leather, glacé leather, kid, shagreen; all kinds of leather with stamped patterns; lacquered skins, small.	do	22.50	18.00
	(3) Large ox skins, cow skins, bull skins, buffalo skins, horse skins, asses' skins, and pig skins, in whole or half skins, without stamped patterns, grained or not, even with artificial grain, dyed or not.	do	11.00	10.00
.....	Parchment	do	11.00	.....
	(4) Lacquered skins, large	do	21.75	10.20
	NOTE.—Parings and scraps of prepared skins, unless they are cut out for boots and shoes or small leather ware, pay the same duty as the component material.			

TARIFF SCHEDULES.

RUSSIA—Continued.

Tariff No.	Articles.	Unit of quantity.	Rate of duty.	
			General.	Conventional.
57	Manufactures of leather and skins:		<i>Rubles.</i>	<i>Rubles.</i>
	(1) Boots and shoes of every description (except those separately designated), in a finished or partly finished condition.	Funt	1.95	1.50
	Leather of all kinds cut out for boots and shoes or small articles.	.....do	1.46½	.....
	(2) Boots and shoes for women, made of silk stuff or kid, in a finished or partly finished condition.	.....do	3.90	2.55
	(3) Leather gloves of all kinds .....	.....do	4.50	3.80
	Manufactures of chamois leather, dog skin, and kid, morocco leather and parchment, except boots, shoes, and surgical appliances.	.....do	4.50	.....
	Small articles of leather of all kinds, weighing not more than ¼ funt (7½ oz.) each, e. g., ladies' bags, purses, portfolios, cigar cases, letter cases, with or without parts of common metal (including ornaments and clasps of common metal, gilt, or silvered), or of other materials (including trimming or lining of silk or half silk).	.....do	4.50	2.70
	Gloves, cut out but not sewn .....	.....do	2.25	.....
	(4) Harness with accessories, saddlery wares, whips made from leather thongs.	.....do	1.07½	.90
	(5) Box and trunk makers' wares, bag makers' wares (except those specified in subdivision (3) of No. 57), and sporting requisites made of leather or thick tissues of jute or hemp; prepared leather for bookbinding; all other manufactures of leather not separately designated, even with fittings of metal or other materials, if they do not fall under the classification of costly fancy articles.	.....do	1.05	.....
	Note and pocket books, weighing more than ¼ funt (7½ oz.) each, of leather or of chamois leather glazed, or of morocco leather or parchment.	.....do	1.05	1.05
	(6) Belting for machinery, sewn; whips, buckets, and similar coarse articles of leather.	.....do .....	.30	.....
	Belting for machinery, unsewn, small round transmission belts, leather picker bends for weaving looms.	Pood .....	.....	10.00
	NOTE.—Imports from the United States into Russia are admitted at the conventional rates of duty.			

SPAIN.

[Peseta = \$0.193.]

Tariff No.	Articles.	Unit of quantity.	Rate of duty.	
			First tariff.	Second tariff.
			<i>Pescetas.</i>	<i>Pescetas.</i>
480	Hides and skins, untanned, dry	100 kilos ..	4.40	4.40
481	Do., fresh, salted or not .....	.....do	8.00	3.00
483	Chamois skin and parchment	Kilo	3.00	2.00
484	Patent leather of all kinds .....	.....do	3.50	2.40
485	Sole leather, dyed and dressed or not .....	.....do	1.00	.80
486	Other skins, tanned or dressed, weighing not more than 9 kilos per dozen.	.....do	2.50	1.50
487	All other skins not specified .....	.....do	3.00	2.00
488	Skins cut into pieces, for foot wear or other uses, even embossed.	.....do	5.00	3.00
489	Transmission belts and cords, leather tubes, and other manufactures of leather and skin for machinery.	.....do	3.00	2.00
493	Leather gloves .....	.....do	20.00	20.00
494	Foot wear of leather, even containing parts of other materials.	.....do	12.00	8.00
495	Trunks, valises, hand bags, hat boxes, and other similar articles made up of leather or lined with leather.	.....do	6.00	4.00
496	Harness and other articles of hides or skins for driving and riding.	.....do	8.00	6.00
497	Other articles of skin or lined with the same material, weighing 2 kilos and more each.	.....do	9.00	7.00
498	Do., up to 2 kilos .....	.....do	15.00	10.00

SWEDEN.

[Krona=\$0.268.]

Tariff No.	Articles.	Unit of quality.	Rate of duty.
	Hides and skins other than peltry:		<i>Krone.</i>
218	Undressed of all kinds.....		Free.
	Dressed:		
219	Sole leather for interior or exterior use.....	Kilo.....	0.40
220	Other.....	do.....	.65
206	Gloves of leather, of all kinds.....	do.....	6.00
557	Saddlers' wares not specially mentioned, with or without fittings.....	do.....	1.20
539	Portfolios, other than of silk or half silk (including pocketbooks and cigar cases).....	do.....	1.20
372	Manufactures of leather not elsewhere mentioned.....	do.....	1.20
483	Valises, portemanteaux, and hat boxes.....	do.....	1.20
547	Belting of leather, sewn or riveted together, or united in any manner.	Ad valorem.	10 per cent.
	Boots and shoes not specially mentioned:		
578	Of morocco or cordovan leather, or of skins, dyed, pressed, or varnished.	Kilo.....	5.00
580	Other than that of silk or other tissues, or those mentioned in No. 580..	do.....	2.00

NORWAY.

[Krone=\$0.268.]

Tariff No.	Articles.	Unit of quantity.	Rate of duty.	
			Maximum.	Minimum.
	<i>Skins and hides.</i>			
	A. WITH HAIR NOT SPECIALLY MENTIONED.			
	(a) Undressed:		<i>Krone.</i>	<i>Krone.</i>
590	1. Dried.....		Free.	Free.
591	2. Green.....		Free.	Free.
	(b.) Dressed (dutiable as dressed skins for peltries, Nos. 609-611).			
	B. WITHOUT HAIR.			
592	I. Neither tanned nor dressed, salted.....		Free.	Free.
593	II. Other:			
	(a) Tanned, dressed, or undressed, not mentioned elsewhere (including sole leather, leather for inner soles, and artificial leather).	Kilo.....	0.40	0.30
	NOTE.—Clean-cut sole leather (bend pieces), as also cut-out soles and the like, shall pay in addition a surtax of 50 per cent. The surtax shall not be levied on belly, leg, head, or neck pieces.			
	(b) Tawed, bronzed, shagreened, dyed, varnished, lacquered, shamoid, horse, greased, waxed, pressed, and similar leather—			
594	1. Weighing more than 2 kilos per skin.....	do.....	.70	.50
595	2. Weighing from 1 to 2 kilos per skin.....	do.....	1.30	1.00
	3. Weighing less than 1 kilo per skin:			
596	(a) Glove-skins.....	do.....	1.50	1.25
597	(b) Other.....	do.....	2.00	1.50
	NOTE.—Parts which have not undergone any further process of manufacture beyond being cut to shape, such as tongues, upper leathers, etc., and which are not mentioned elsewhere, shall be dutiable according to the component material, without the surtax.			
	III. Manufactures of hides and skins:			
228	Gloves, wholly or partly of skin, sewn or merely cut out.	do.....	13.00	10.00
	Saddlery not specially mentioned:			
598	(a) With gilt, silvered, or plated mountings.....	do.....	5.00	4.00
599	(b) With mountings of nickel or hardened rubber.	do.....	2.50	2.00
	(c) Other:			
600	1. Saddles, riding, and driving whips.....	do.....	2.00	1.50
601	2. Other articles, including belts, trusses, cap peaks, and all kinds of straps, except machine belting.	do.....	1.30	1.00
	3. Shoemakers' wares.			
604	(c) Of patent, shagreened, bronzed, tawed, varnished or dyed leather, combined or not with other kinds of leather.	do.....	6.00	4.50
605	(d) Of skin or leather treated in other ways (except oil-dressed).	do.....	2.50	2.00

TARIFF SCHEDULES.
NORWAY—Continued.

Tariff No.	Articles.	Unit of quantity.	Rate of duty.	
			Maximum.	Minimum.
	<i>Skins and hides—Continued.</i>			
	<i>B. WITHOUT HAIR—continued.</i>			
	III. Manufactures of hides and skins—Continued.			
	Cases, pocketbooks, etc., including cases for instruments, toilet accessories, and barbers; sewing, writing, and similar cases, with or without their respective fittings; sketchbooks, notebooks, portfolios, albums, and purses, all with their immediate packing:			
134	(c) Of leather or silk.....	Kilo	<i>Krone.</i> 4.50	<i>Krone.</i> 3.50
	Manufactures not otherwise enumerated (dutiable as the skins and leather of which they are composed, with an additional 50 per cent).			
	Skins and hides dressed, whether sewn together or not:			
609	1. Pennsylvania, sable, marten, black fox, silver fox, and blue fox skins.	.....do	10.00	8.00
610	2. Beaver, polecat (fitchet and chinchilla), mink, and skunk skins.	.....do	7.00	5.00
611	3. Other kinds .....	.....do	2.00	1.50
612	4. Waste of hides and skins.....	.....do	Free.	Free.
	NORE.—Products of the United States are admitted into Norway at the minimum rates.			

SWITZERLAND.
[Franc=\$0.193.]

Tariff No.	Articles.	Unit of quantity.	Rate of duty.	
			General.	Conventional.
	HIDES AND SKINS.			
	Raw, salted or not, dried:		<i>Francs.</i>	<i>Francs.</i>
172	Hides	100 kilos..	0.60	0.30
173	Skins.....	.....do .....	.60	.30
	NOTE.—“Hides” are held to include skins of large animals, such as bulls, oxen, cows, horses, etc.; and by “skins” are understood the skins of smaller animals, such as calves, sheep, goats, etc.			
174	Merely tanned, fresh from the tanning or dyeing pits, wet or dry. NOTE.—A reduction of 40 per cent is allowed on wet hides and skins.	.....do	20.00	16.00
175	Tanned, curried; with the hair, for saddlers' or furriers' work.	.....do	15.00	10.00
	Leather:			
177	Sole leather of all kinds, including neck and flank pieces.	.....do	24.00	16.00
	Leather for uppers:			
178	Calf leather, natural brown or waxed.....	.....do	40.00	24.00
179	Do., black-grained and shagreened.....	.....do	24.00	18.00
180	Vamp leather of cowhide or oxhide, natural color or waxed.	.....do	12.00	10.00
181	Other leather for uppers.....	.....do	8.00	4.00
	Leather for harness, belts, and military equipment:			
182	Black or natural color (including leather for transmission belts).	.....do	30.00	20.00
183	Varnished and dyed.....	.....do	20.00	10.00
184	Leather of all kinds not specially mentioned .....	.....do	8.00	4.00
185	Transmission belts of leather.....	.....do	50.00	35.00
186	Waste of leather of all kinds not elsewhere mentioned, artificial leather.	.....do	12.00	8.00
187	Prepared parts for manufactures of leather other than boots or shoes.	.....do	45.00	30.00
188	Finished leather manufactures (except traveling requisites and those articles mentioned in the following tariff number).	.....do	120.00	65.00
189	Finished parts of leather manufactures for saddlery, neither mounted nor put together, such as blinkers, cruppers, and harness fittings of all kinds.	.....do	40.00	30.00

SWITZERLAND—Continued.

Tariff No.	Articles.	Unit of quantity.	Rate of duty.	
			General.	Conventional.
	HIDES AND SKINS—continued.			
	Roughly shaped parts for boots and shoes:		<i>Francs.</i>	<i>Francs.</i>
190	Of leather.....	100 kilos..	60.00	50.00
192	Soles of all kinds to be put into boots and shoes, except cork soles.	.....do	60.00	50.00
	Boots and shoes:			
	Of brown or waxed leather, cow and heifer hides, buckskin and undressed leather—			
193	Unlined (including those lined exclusively with the same kind of leather).	.....do	60.00	45.00
194	Lined.....	.....do	100.00	65.00
195	With uppers of calf, horse, kid, sheep, or fancy leather, lined or not.	.....do	150.00	80.00
199	Of canvas, felt, cotton materials, lastings, with leather soles or trimmings of leather.	.....do	80.00	50.00
	NOTE.—Including shoes of velvet or plush (except silk velvet or silk plush, but including corded velvet), with leather soles or fittings of leather.			
200	Of silk or silk velvet or plush, with leather soles or trimmings of leather.	.....do	200.00	150.00
201	Not otherwise mentioned.....	.....do	80.00	45.00
202	Leather gloves.....	.....do	300.00	150.00
	Traveling requisites (trunks, bags, valises, portemanteaus, etc.):			
1152	Of leather.....	.....do	100.00	65.00
	NOTE.—Products of the United States are admitted into Switzerland at the conventional rates of duty.			

UNITED KINGDOM.

Leather and manufactures thereof are admitted free of duty.

NORTH AMERICA.

CANADA.

Tariff No.	Articles.	Rate of duty.
LEATHER, AND MANUFACTURES OF.		
212	Dongola, cordovan, calf, sheep, lamb, kid or goat, kangaroo, alligator, or other upper leather, and all leather dressed, waxed, glazed, or further finished than tanned, n. e. s.; harness leather and chamois skin.	17½ p. c. ad val.
213	Skins for morocco leather, tanned, but not further manufactured; sole leather and belting leather of all kinds; tanners' scrap leather, and leather and skins, n. o. p.	15 p. c. ad val.
214	Glove leathers, tanned or dressed, colored or uncolored, when imported by glove manufacturers for use in their own factories in the manufacture of gloves.	10 p. c. ad val.
215	Japanned, patent, or enameled leather, and morocco leather.....	25 p. c. ad val.
216	Leather board, leatheroid, and manufactures thereof, n. o. p.....	25 p. c. ad val.
217	Whips of all kinds, including thongs and lashes.....	35 p. c. ad val.
218	Belting, of leather or other material, n. e. s.....	20 p. c. ad val.
219	Boots and shoes, and slippers, of any material, n. e. s.....	25 p. c. ad val.
220	Manufactures of raw hide, and all manufactures of leather, n. o. p.....	25 p. c. ad val.
	NOTE. —Products of the United Kingdom and of most of the British possessions pay only two-thirds of the duty given above.	

MEXICO.

[Peso = \$0.498.]

Tariff No.	Articles.	Unit of quantity.	Rate of duty.
ARTICLES OF LEATHER.			
59	Articles of leather not specially mentioned.....	Kilo, legal.....	<i>Pesos.</i> 2.00
60	Leather belting for machinery.....	Kilo, gross.....	.55
62	Calfskins, patent leather, kid, chamois, and other common prepared skins, not specially mentioned.	Kilo, legal.....	1.60
63	Leather gloves, plain or embroidered, without lining.....	do	6.00
64	Leather gloves, plain or embroidered, lined.....	do	3.00
65	Leather gloves, lined or unlined, with strengthened wrists.....	do	1.50
66	Manufactures of tanned skins covered with fine furs.....	do	4.50
67	Tanned skins covered with fine fur.....	do	2.25
68	Sole leather	do	1.00
FOOT WEAR.			
69	Slippers of all kinds up to 12 centimeters sole length, of leather or other material, not combined with silk, even though ornamented or embroidered with silk or base metal.	Pair .....	.30
70	Slippers and shoes of leather or other material, not combined with silk, even though ornamented or embroidered with silk or metal of inferior quality, from 12 to 20 centimeters in length.	do .....	.40
71	Slippers and shoes of leather or other material, not combined with silk, even though ornamented or embroidered with silk or metal of inferior quality, of more than 20 centimeters in length.	do .....	.60
72	Leather boots, for men	do	3.00
73	High and low shoes, up to 12 centimeters in length, of leather or cloth of all kinds and materials, provided they do not contain precious metal.	do .....	.70
74	High and low shoes, over 12 and up to 20 centimeters in length, of leather or cloth of all kinds of materials, provided they are not combined with fine metal.	do	1.15
75	High and low shoes, over 20 centimeters in length, of leather or cloth of all kinds of materials, provided they are not combined with fine metal.	do	1.75

NEWFOUNDLAND.

Tariff No.	Articles.	Rate of duty.
90	Leather, viz: Leather, known as "sole leather"..... Rough, split, undressed leather, when imported by tanners for further dressing. Rough, undressed leather, when imported by tanners for further dressing. Glove-grain, boot-grain, oil-grain, buff, split, imitation goat, polished pebble, and waxed calf leather, when bark tanned. All other upper leathers, n. e. s., and japanned, patent, or enameled leather. Harness leather, n. e. s., chamois skin, and morocco leather, n. o. p	20 p. c. ad val. 20 p. c. ad val. 3 c. per lb. 30 p. c. ad val. 20 p. c. ad val. 25 p. c. ad val.
91	Leather board, leatheroid, and manufactures thereof, n. e. s..... Leatherware, viz., boots, shoes, slippers, and gaiters, or leggings of leather, leatheroid, or other material.	30 p. c. ad val. 40 p. c. ad val.

CENTRAL AMERICA.

COSTA RICA.

[Colon, gold=\$0.465.]

Tariff No.	Articles.	Unit of quantity.	Rate of duty.
			<i>Colon.</i>
.....	Boots and shoes of common leather, double-soled, nailed with iron brads or wooden pegs.	Kilo., gross weight.	1.00
.....	The same of common calf leather, single or double-soled, sewed or not.	.....do	2.00
.....	Boots and shoes of leather of better quality than common calf, of kid, satin, cordovan and other, varnished or lacquered, nailed or sewed, double or single-soled.	.....do	3.50
.....	Boots and shoes of stuff, with or without tips, with sewed or nailed leather parts:		
.....	Of cotton stuff.....	.....do	2.00
.....	Of woolen stuff.....	.....do	3.00
.....	Of silken stuff with or without embroidery .....	.....do	4.50
	Half made-up boots and shoes or parts imported in cut-out separate or stitched pieces of all kinds, lined or not, shall pay duty according to kind, with a surtax of 25 per cent.		
.....	Skins, common, or sole leather and kipskin, patent leather and calfskin, sheepskin, cordovan, morocco, kid, etc.	Kilo .....	.11
.....	Harness makers' wares of leather, such as girths, straps, saddlebags, trunks or valises, saddles, harness, and similar articles not specially mentioned, razor strops.	.....do .....	.83
.....	Shot bags or cartridge belts for hunters, sacks or bags for other uses, toilet and other cases, portfolios and cases, sheepskin and morocco cut in bands for hats, riding and other whips.	.....do .....	.54
.....	Gloves and gauntlets.....	.....do	2.17
.....	Belting for machines.....	.....do .....	.02
	NOTE.—The above articles are subject, in addition to the duty, to a surtax of 50 per cent.		
	N. B.—A new tariff is in course of preparation.		

GUATEMALA.

[Peso = \$0.480.]

Tariff No.	Articles.	Unit of quantity.	Rate of duty.
			<i>Pesos.</i>
1471	Cowhides.....	Kilo	0.25
1473	Calfskins and kipskins.....	.....do .....	.35
1476	Top-boots and half-boots of leather, of all kinds, for men.....	Pair	4.00
1477	Riding boots of leather, of all kinds.....	.....do	6.00
1478	Ordinary boots and shoes of any kind of leather.....	Kilo	3.00
1482	Sandals of leather.....	.....do .....	.60
1486	Shagreen .....	.....do .....	.12
1493	Parts of boots or boot legs, of leather, of any size, not put together.	.....do	2.00
1494	Patent leather of all kinds .....	.....do .....	.45
1499	Transmission belting of leather.....	.....do .....	.30
1518	Leggings of leather, of all kinds.....	.....do	3.00
1523	Sole leather .....	.....do .....	.12
1524	Morocco leather .....	.....do .....	.12

HONDURAS.

[Peso=\$0.480.]

Tariff No.	Articles.	Unit of quantity.	Rate of duty.
			<i>Pesos.</i>
554	Shagreen	½ kilo, gross ..	0.25
561	Leather, varnished.....	.....do .....	.25
771	Chamois leather.....	.....do .....	.25
1025	Morocco leather.....	.....do .....	.25
1441	Sole leather .....	.....do .....	.10
1650	Boots and shoes of all kinds.....	.....do .....	.60

TARIFF SCHEDULES.

NICARAGUA.

[Peso=\$0.480.]

Tariff No.	Articles.	Unit of quantity.	Rate of duty.
			<i>Pesos.</i>
78	Calfskin, patent leather, prepared kid, and similar skins, not specified.	Kilo	0.60
84	Pigskins and imitations thereof.....	do	1.00
85	Hides and skins, dressed or tanned, with the hair or feathers.....	do	2.50
87	Kipskin and sole leather.....	do .....	.60
88	Turkish and other slippers of leather, not combined with silk or metal.	do	2.00
90	Top boots for men.....	do	1.50
91	Foot wear of all kinds, not specified, including gaiters and leggings for men and children.	do	2.00
92	Do., for ladies	do	3.00
93	Cut-out parts of leather for the manufacture of boots and shoes....	do	1.20
94	Coarse or heavy boots for workmen.....	do	1.00

PANAMA.

Leather and leather manufactures imported into Panama are dutiable at 10 per cent ad valorem.

SALVADOR.

[Peso = \$0.480.]

Tariff No.	Articles.	Unit of quantity.	Rate of duty.
			<i>Pesos.</i>
75	Cowhides and sole leather	Kilo	0.20
76	Buckskin, sheepskin, buffalo, kid, cordovan, calfskin, enameled leather, pigskin or imitations thereof, shagreen, morocco, chamois, and other leathers not specified.	do .....	.80
81	Gaiters, shoes, boots, leggings of any kind, made up or in pieces....	do	3.00

WEST INDIES.

JAMAICA.

Leather and leather goods are not mentioned in the tariff of Jamaica, and are therefore subject to an ad valorem duty of 16½ per cent.

CUBA.

Tariff No.	Articles.	Unit of quantity.	Present rate.	Reduction to United States.	Present rate to United States.
	GROUP 2.—Hides, skins, and leather wares.			<i>Per cent.</i>	
189	Pelts in their natural state or dressed	p. c. ad val.	12½	20	10
190	Hides or skins, raw or uncured, dry, salted, or pickled.	do	12½	20	10
191	Hides tanned with the hair.....	do	18½	20	15
192	Hides tanned, dressed, and finished, without the hair, including rough leather, sole leather, sole leather cut soles for mending, belting leather, upper leather, harness and saddlery leather.	do	18½	20	15
193	Skins tanned, dressed, and finished, including calf, kangaroo, sheep, lamb, goat, and kid skins.	do	18½	20	15
194	Hides and skins, varnished, japanned, or enameled, and skins with figures, engravings, or embossed.	do	25	20	20
195	Leather cut into shoe uppers or vamps or other forms suitable for conversion into manufactured articles, and also manufactures of leather, finished or unfinished, not otherwise provided for.	do	31½	20	25

CUBA—Continued.

Tariff No.	Articles.	Unit of quantity.	Present rate.	Reduction to United States.	Present rate to United States.
	GROUP 2.—Hides, skins, and leather wares—Cont'd.				
			<i>Dollars.</i>	<i>Per cent.</i>	<i>Dollars.</i>
196	Gloves of skin	Kilog	4.375	20	3.50
	(a) Common baseball and boxing gloves .....	.....do	1.25	20	1.00
197	Boots, shoes, and slippers:				
	(a) Men's, size 5 and up (American standard) and 10 per cent ad valorem.	Pair .....	.195	30	.1365
	(b) Boys', youths', women's, misses', and children's.	.....do .....	.13	30	.091
	and 10 per cent ad valorem.				
	Boots and shoes, size 9½ (children's) and under (American standard).	.....do .....	.065	30	.0455
	and 10 per cent ad valorem.				
198	Other boots, shoes, and slippers, fancy or ornamented.	.....do .....	.195	30	.1365
	and 10 per cent ad valorem.				
199	Riding boots .....	.....do	2.50	20	2.00
200	Sandals made without leather	Dozen .....	.50	20	.40
201	Saddlery and harness:				
	(a) Draft harness other than for carriages....	Kilog .....	.0625	20	.05
	(b) Carriage harness .....	.....do .....	.125	20	.10
	(c) Othersaddleryand harness-makers' wares; valises, hat boxes, and traveling bags of cardboard or leather.	.....do .....	.25	20	.20
202	Other manufactures of leather or covered with leather.	p. c. ad val.	31½	20	25

DUTCH GUIANA.

[Florin=\$0.402.]

Tariff No.	Articles.	Unit of quantity.	Rate of duty.
16	Hides and leather: Hides, prepared; sole leather, leather for harness and saddles, parchment; strap makers,' shoemakers,' and other wares of leather not specially mentioned.	Kilo	<i>Florin.</i> 0.05

CURAÇAO.

Leather and manufactures thereof are subject to a duty of 3 per cent ad valorem.

ST. THOMAS.

Leather and manufactures thereof are subject to a duty of 3 per cent ad valorem.

ST. CROIX.

Articles.	Rate of duty.
Skins and leather.	5 p. ct. ad val.
Shoes.	12½ p. ct. ad val.
NOTE.—The above rates are collected on fixed values, which are generally below the market values of the imported articles.	

SOUTH AMERICA.

ARGENTINA.

Articles.	Rate of duty.
Hides and skins, tanned	40 p. ct. ad val.
Footwear of all kinds, finished or not	40 p. ct. ad val.
NOTE.—The above rates of duty are collected on fixed values.	

BRAZIL.

[Milreis, gold = \$0.546; paper currency fluctuating.]

Tariff No.	Articles.	Unit of quantity.	Rate of duty.
			<i>Reis.</i>
24	Sole leather and tanned cowhide	Kilo	1,800
	Wild boar, chamois, morocco, or moroccoed leather, and kid skins ..	do	2,200
	Other, not specially mentioned:		
	Of natural color	do	1,400
	Dyed or waxed	do	2,200
	Patent leather:		
	Ox and horse hides, grained—so-called Russian leather	do	6,000
	Do., smooth, and all other smooth or grained leather	do	3,000
	NOTE.—Pressed or embossed leather and hides are subject to a surtax of 25 per cent.		
80	Boots and shoes:		
	Long riding boots	Pair	20,000
	Do., not specially mentioned	do	15,000
	Boots and laced shoes—		
	Of leather or skin, etc., up to 22 cm. in length	do	3,000
	Do., over 22 cm. in length	do	7,000
	Low shoes and buskins—		
	Of leather or skin, etc., up to 22 cm. in length	do	1,200
	Do., above 22 cm. in length	do	3,200
	Slippers and sandals—		
	Of leather or skin, etc., up to 22 cm. in length	do	700
	Do., above 22 cm. in length	do	1,400
	NOTE.—The duty on the above-mentioned articles, with the exception of morocco, chamois, and kid leather, is paid half in gold and half in currency.		

CHILE.

[Peso, gold = \$0.365.]

Tariff No.	Articles.	Unit of quantity.	Valuation.	Rate of duty.
	Leather, tanned or fulled, white or dyed:		<i>Pesos.</i>	<i>Per cent.</i>
43	Sheep or other animal skins, lined or not, for carpets or blankets.	Kilo	6.60	25
44	Buffalo, horse, or ox, varnished or not	do	4.00	25
45	Doe, chamois leather, imitations of doe leather for cleaning metals, and pigskins and imitations thereof.	do	6.00	25 and 5
46	Basil, calf, and shagreen skins other than greased black skins, kid skins and imitations thereof (except glove skins), morocco of all kinds and imitations thereof, and tawed skins; perfumed or not.	do	10.00	25
47	Shagreen, or imitations thereof, and calf, black-dyed, greased, for footwear.	do	5.00	25
48	Varnished, not specially mentioned	do	8.00	25
49	Kid and imitations thereof, for gloves	do	20.00	25 and 5
50	The same as above, cut out for gloves	do	40.00	25 and 5
51	Crocodile, for footwear or other purposes	do	20.00	25
52	Parchment for bookbinding	do	15.00	25
	NOTE.—When hides are packed up they shall be appraised with the weight of the packing.			
	Hides and skins undyed, N. W.:			
53	Goat or other animals, semi-tanned	do	4.00	25
54	Sole leather, for footwear and other purposes	do	8.00	25

CHILE—Continued.

Tariff No.	Articles.	Unit of quantity.	Valuation.	Rate of duty.
	Footwear:		<i>Pesos.</i>	<i>Per cent.</i>
84	Boots of leather or of leather and tissue, or of any other material not containing silk, for children.	Dozen	24.00	25
85	The same, of tissue containing silk.....	do	48.00	25
86	Boots of leather or leather and tissue, or of any other material not containing silk, for boys.	do	48.00	60
87	The same, of tissue containing silk.....	do	72.00	60
88	Boots of leather or leather and tissue, or of any other material not containing silk, for women and girls.	do	96.00	60
89	The same, of tissue containing silk.....	do	120.00	60
90	Leather top boots of all kinds, with tops not exceeding 45 cm., measured from the sole, for men.	do	200.00	60
91	The same, with tops exceeding 45 cm.....	do	400.00	60
92	Boots and shoes of leather or leather and tissue, or of any other material not containing silk, for children.	do	15.00	25
93	The same, of tissue containing silk.....	do	36.00	25
94	Boots and shoes of leather or leather and tissue, or of any other material not containing silk, for boys.	do	30.00	60
95	The same, of tissue containing silk.....	do	60.00	60
96	Boots and shoes of leather or leather and tissue, or any other material not containing silk, for women and girls.	do	72.00	60
97	The same, of tissue containing silk.....	do	96.00	60
98	Boots and shoes of leather, with or without tissue, for men and youths.	do	144.00	60
100	The same, of leather, for domestic wear.....	do	25.00	60
101	Shoes, or boots of any material, with rubber soles, for sports, N. W.	Kilo	8.00	60
102	Shoes, slippers, and sandals, of vegetable materials, with soles of leather, hemp, jute, or straw, for bath or other purposes, N. W.	do	1.40	60
105	Shoes of leather, with wooden soles, with or without lining, without leggings.	Dozen	15.00	60
106	Shoes of leather, with leather soles.....	do	60.00	60
<p>NOTE.—Children's foot wear includes such as have not more than 15 cm. length of sole; boys, from 15 up to 22 cm., inclusive; women's, men's, or youths', over 22 cm. The above described foot wear will be considered as boots: For children when the tops exceed 9 cm.; for boys when over 12 cm., for women, over 15 cm. The top shall be measured at its highest part from the sole without taking account of the heel. Foot wear with tops not exceeding the above-mentioned dimensions will be classed as shoes.</p> <p>* This column contains arbitrary values, on which ad valorem rates are based.</p>				

COLOMBIA.

[Dollar, gold = \$1.00.]

Articles.	Unit of quantity.	Rate of duty.
Hides and leather of all kinds, except patent leather	Kilo	<i>Pesos.</i> 0.10
Patent leather	do ....	.15
Manufactures of leather, including boots and shoes	do ....	.80
NOTE.—In addition to the above duties, there is a surtax of 70 per cent.		

ECUADOR.

[Sucre, gold = \$0.487.]

Articles.	Unit of quantity.	Rate of duty.
Prepared skins for shoes or other uses	Kilo	<i>Sucres.</i> 0.20
Shoes of all kinds, except those of rubber	do	1.20
NOTE.—Besides the duties given above, imports into Ecuador are subject to a surtax of 100 per cent on the duties, storage, and wharfage dues, and a number of other dues.		

TARIFF SCHEDULES.
BRITISH GUIANA.

Articles.	Rate of duty.
Leather and manufactures thereof	15 p. ct. ad val.

PERU.

[Libra=10 sols=\$0.4866½.]

Tariff No.	Articles.	Unit of quantity.	Rate of duty.
436	Boots and shoes of leather of all kinds for the military, and thick-soled boots and shoes, with nails and screws, for miners and hunters.	Kilo	<i>Sols.</i> 1. 125
437	Boots and shoes of common and fine leather, in cardboard boxes.	.....do	1. 98
543	Boot and shoe leather in patterns, cut out and sewn, of all kinds.	.....do	1. 35
1212	Pieces of leather of all kinds, unsewn, for shoes .....	.....do	1. 20
1922	Hides and skins of all kinds, tanned, dressed, varnished, and dyed, in cases.	.....do	1. 00
1923	Do., in bales or other packages.....	.....do	1. 20

VENEZUELA.

[Bollivar, gold=\$0.193.]

Tariff No.	Articles.	Unit of quantity.	Rate of duty.
295	Sole leather, dyed or not	Kilo	<i>Bolivars.</i> 0. 75
536	Boots and shoes, and tanned skins prepared for boots and shoes..	.....do	20. 00
431	Basil and tanned skins, not manufactured, except those specified in No. 295.	.....do	2. 50

ASIA.

BRITISH INDIA.

Articles.	Rate of duty.
All leather and manufactures thereof (except raw hides and skins and belting for machinery, which are free).	5 p. ct. ad val.

CHINA.

[Picul=133½ pounds; haikwan tael=\$0.801.]

Articles.	Unit of quantity.	Rate of duty.
Leather:		<i>Haikwan tael.</i>
Calf	Picul	7. 000
Colored .....	.....do	7. 000
Cow .....	.....do	2. 500
Kid .....	.....do	7. 000
Sole .....	.....do	2. 500
Patent .....	.....do	7. 000
All other kinds .....	.....do	5 p. ct. ad val.
Boots and shoes .....	.....do	5 p. ct. ad val.

JAPAN.

[Kin=1.825 pounds; yen=\$0.498.]

Tariff No.	Articles.	Unit of quantity.	Rate of duty.	
			General.	Conventional.
68	Leather of all kinds:		Yen.	Yen.
	Sole leather.....	100 kin ...	13.30	5.69
	Tanned hide, known as "Indian blood leather."	.....do	7.60	10 p. ct. ad val.
	Lacquered or varnished .....	.....do	22.40	10 p. ct. ad val.
	Of sheep and goat.....	.....do	22.40	10 p. ct. ad val.
808	Boots, shoes, slippers, sandals, clogs, etc.....	.....do	40 p. ct. ad val.	.....do
	NOTE.—Imports from the United States are admitted into Japan at the conventional rates of duty. The rates given above are to go into effect Oct. 1, 1906.			

PHILIPPINE ISLANDS.

GROUP 2.—Hides, skins, and leather wares.

213. Pelts, in their natural state or dressed for trimmings, G. W., kilo, \$1.
214. Hides and skins, green or not tanned, G. W., 100 kilos, \$1.50.
- (a) The same, wet salted, G. W., 100 kilos, 75 cents.
- (b) The same, dry salted, G. W., 100 kilos, \$1.
215. Hides tanned with the hair on, G. W., kilo, 10 cents.
216. Hides tanned without the hair:
- (a) Cow and other large hides, whole, G. W., kilo, 10 cents.
- (b) Other, and backs of large hides, G. W., kilo, 25 cents.
217. Hides and skins curried, dyed or not:
- (a) Sheepskins (basils), N. W., kilo, 15 cents
- (b) Calf or goatskins, N. W., kilo, 15 cents.
- (c) Kid, lamb, or young calf skins, N. W., kilo, 25 cents.
- (d) Cow, and other large hides, whole, N. W., kilo, 15 cents.
- (e) Backs of large hides, and skins not specially mentioned, N. W., kilo, 20 cents.
218. Hides and skins, varnished, satiny, grained, dulled, and hides and skins with figures, engravings, or embossed, N. W., kilo, 25 cents.
- Leather cut out for boots and shoes or other articles shall pay 20 per centum additional to the duty on the material.
219. Chamois leather or parchment, of all kinds, and gilt or bronzed hides and skins, N. W., kilo, 40 cents.
220. Gloves of all kinds in which leather is the component material of chief value, per pair, 10 cents:
- Provided, That none of the articles classified under this paragraph shall pay a less rate of duty than 20 per centum ad valorem.
221. Shoes of cowhide and similar leather and canvas:
- (a) For men, size numbered 5½ or larger, per pair, 10 cents.
- (b) For boys, smaller than size numbered 5½, per pair, 5 cents.
- (c) For women, size numbered 2½ or larger, per pair, 8 cents.
- (d) For girls, smaller than size numbered 2½, per pair, 5 cents.
- (e) For babies, per pair, 5 cents.
222. Shoes of patent and similar leather and of imitation patent leather:
- (a) For men, size numbered 5½ or larger, per pair, 40 cents.
- (b) For boys, smaller than size numbered 5½, per pair, 30 cents.
- (c) For women, size numbered 2½ or larger, per pair, 35 cents.
- (d) For girls, smaller than size numbered 2½, per pair, 30 cents.
- (e) For babies, per pair, 10 cents.
223. Shoes or gaiters of calfskin, kid, and similar leather, with elastic or buttons or for lacing:
- (a) For men, size numbered 5½ or larger, per pair, 30 cents.
- (b) For boys, smaller than size numbered 5½, per pair, 20 cents.
- (c) For women, size numbered 2½ or larger, per pair, 25 cents.
- (d) For girls, smaller than size numbered 2½, per pair, 20 cents.
- (e) For babies, per pair, 5 cents.

224. Gaiters of patent or similar leather and of imitation patent leather:

- (a) For men, size numbered 5½ or larger, per pair, 40 cents.
- (b) For boys, smaller than size numbered 5½, per pair, 30 cents.
- (c) For women, size numbered 2½ or larger, per pair, 35 cents.
- (d) For girls, smaller than size numbered 2½, per pair, 30 cents.
- (e) For babies, per pair, 10 cents.

NOTE.—The sizes of shoes and gaiters referred to in the above paragraphs are of the American standard.

225. Other boots and shoes, fancy, per pair, 50 cents.

Other boots and shoes not specifically provided for:

- (a) For men, size numbered 5½ or larger, per pair, 30 cents.
- (b) For boys, smaller than size numbered 5½, per pair, 20 cents.
- (c) For women, size numbered 2½ or larger, per pair, 25 cents.
- (d) For girls, smaller than size numbered 2½ per pair, 20 cents.
- (e) For babies, per pair, 5 cents.

226. Riding boots, per pair, \$1.

227. Sandals:

- (a) Of leather, per pair, 15 cents.
- (b) Of other materials, and common shoes worn by the Chinese, per pair, 10 cents.
- (c) Spanish alpargatas, with hemp or corded soles, per pair, 5 cents.

228. Saddlery and harness:

- (a) Draft harness, and parts, other than for carriages, N. W., kilo, 15 cents.
- (b) Carriage harness and parts, N. W., kilo, 30 cents.
- (c) Other saddlery and harness-makers' wares, including saddles, valises, hat boxes, and traveling bags, wholly or in part of leather, N. W., kilo, 30 cents.

229. Other manufactures of leather or covered with leather, not specially provided for, N. W., kilo, 40 cents.

- (a) Leather belting, N. W., kilo, 25 cents.

Provided, That none of the articles classified under paragraphs 228 or 229 shall pay a less rate of duty than 20 per centum ad valorem.

OCEANIA.

COMMONWEALTH OF AUSTRALIA.

Tariff No.	Articles.	Rate of duty.
116	Boots and shoes, except partly or wholly of lasting or stuff	30 p. ct. ad val.
117	Boots and shoes not elsewhere specified, goloshes, slippers, boot and shoe uppers and tops, wading boots, etc.	25 p. ct. ad val.
120	Leather manufactures not elsewhere included, leather cut into shapes, harness, razor strops, whips, etc.	20 p. ct. ad val.
121	Leather not elsewhere included, including green hide for belting purposes. Minor articles for boots and shoes; minor articles for harness, saddles, leather ware, and whips; leather, viz: Crust or rough tanned, goat, Persian sheep and skivers, pump butts weighing not less than 48 pounds each hide; hog skins.	15 p. ct. ad val. Free.

NEW ZEALAND.

Tariff No.	Articles.	Unit of quantity.	From British dominions.	From other countries.
112	Boots, shoes, and slippers not otherwise enumerated; vamps, uppers, etc.	.....	22½ p. ct. ad val.	33½ p. ct. ad val.
114	Leather:			
	Leather belting and belt leather, harness, bridle, legging, bag, kip (other than East India).	Pound	4d	4d.
	Buff and splits, including satin hides and tweeds.	.....do	3d	3d.
	Cordovan, levanted leather, roans, sheepskins, morocco not otherwise enumerated, basils.	.....do	3d	3d.
	East India kip, Persians, lambskins and goatskins (dressed, other than morocco), kangaroo and wallabi skins (dressed), tan and colored calf.	.....do	2d	2d.
	Leather not otherwise enumerated .....	.....do	1d	1d.
117	Chamois leather .....	.....	20 p. ct. ad val..	20 p. ct. ad val.

NEW ZEALAND—Continued.

Tariff No.	Articles.	Unit of quantity.	From British dominions.	From other countries.
354	Boots, shoes, and slippers for children, No. 1 to 3.	.....	Free	Free.
357	Goatskins, crust or rough tanned, but undressed.	.....	Free	Free.
359	Hogskins.....	.....	Free	Free.
361	Leather japanned or enameled; goatskins dressed as morocco, colored (other than black).	.....	Free	Free.

AFRICA.

SOUTH AFRICAN CUSTOMS UNION.

Tariff No.	Articles.	From United Kingdom.	From other countries.
42	Boots and shoes	12 p. ct. ad val..	15 p. ct. ad val.
	With a minimum per pair of		
	Men's.....9d.	.....	.....
	Women's.....6d.	.....	.....
	Children's.....3d.	.....	.....
96	Leather: patent, enameled, roan, and morocco, and pig skin in the piece, and valve hide.	Free	3 p. ct. ad val.
137	Skins, merely dried or cleaned	Free	Free.
	All other leathers and manufactures of, not specially mentioned.	12 p. ct. ad val..	15 p. ct. ad val.

EGYPT.

An import duty of 8 per cent ad valorem is levied on almost all goods imported into Egypt.

MOZAMBIQUE.

12. Boots and shoes of all kinds, 25 per cent ad valorem.

NOTE.—Boots and shoes of Portuguese origin are admitted at 5 per cent ad valorem.

OTHER TARIFFS.

CONCESSIONS BY SPAIN.

NEW COMMERCIAL TREATY WITH UNITED STATES—MINIMUM RATES CONCEDED.

By the terms of the commercial treaty between the United States and Spain, signed August 1, 1906, and which is to go into effect September 1, imports from the United States into Spain are to be admitted at the minimum rates (Tariff II). These rates include all the concessions granted by Spain to any country, with the exception of Portugal. The new tariff went into effect July 1, 1906. In the issue of Daily and Consular Reports for May 4 (No. 2555) an abstract of the new tariff was published which included all articles received in Spain from the United States. Several of the rates then published are changed by the convention between Spain and the United States, and it is therefore reproduced with the modifications and changes proclaimed by the Royal decree of June 23, and the official announcement of this Government. Except when otherwise stated the basis

for duty is 100 kilos, and the rate is in pesetas. (Kilo=2.2046 pounds; peseta=19.3 cents.)

Articles.	Tariff I.	Tariff II.
	<i>Pesetas.</i>	<i>Pesetas.</i>
Coal, per 1,000 kilos.....	3.50	3.50
Coke and patent fuel, per 1,000 kilos.....	4.00	4.00
Tar, pitch, crude creosote, and schist.....	.20	.20
Crude petroleum.....	30.00	30.00
Lubricating oils.....	40.00	40.00
Benzine, gasoline, and similar products.....	60.00	60.00
Minerals including phosphates, per 1,000 kilos.....	.25	.25
Common white glass bottles, etc.....	7.00	7.00
Photographic plates.....	50.00	50.00
Mirrors.....	100.00	100.00
Iron pigs.....	1.40	1.40
Iron, scrap.....	1.00	1.00
Rails, over 25 kilos in weight.....	6.00	4.20
Rails under 25 kilos in weight.....	7.00	5.60
Iron and steel plates over 5 mm. thick.....	10.00	7.20
Iron and steel plates of 1 to 5 mm. in thickness.....	11.00	8.00
Iron and steel plates less than 1 mm. in thickness.....	13.00	10.00
Tin plates.....	18.00	14.00
Cast-iron pipes.....	6.00	5.00
Iron and steel pipes up to 10 mm. thick.....	9.00	7.00
Joinings for pipes.....	10.00	8.50
Cast-iron columns.....	4.00	4.00
All other rough iron or steel castings weighing over 100 kilos.....	14.00	10.00
All other rough iron or steel castings weighing 25 to 100 kilos.....	16.00	12.00
All other rough iron or steel castings weighing 1 to 25 kilos.....	20.00	16.00
All other rough iron or steel castings weighing under 1 kilo.....	25.00	20.00
Iron and steel wheels weighing over 100 kilos for locomotives or for railway cars.....	20.00	18.00
Blocks.....	25.00	18.00
Steel springs not made of wire.....	13.00	11.00
Iron and steel wire 5 mm., inclusive, thick, unpolished.....	9.00	7.00
Iron and steel wire over 5 mm. thick, polished, or coated with some other metal.....	12.00	10.00
Wire of 1 to 5 mm., gauge, exclusive.....	18.00	11.00
Wire under 1 mm.....	18.00	15.00
Steel-wire cables.....	28.00	24.00
Wire fencing and netting wire springs, and wire cloth when the wire is over 1 mm. gauge.....	18.00	18.00
Fine wire gauze, provided there be not more than 40 strands to the square centimeter.....	40.00	30.00
Fine wire gauze with more than 40 strands per square centimeter.....	110.00	90.00
Locks and keys.....	75.00	60.00
Locks and keys, when made with other metals.....	100.00	75.00
Cooking and heating stoves.....	40.00	35.00
Safes.....	60.00	48.00
Iron beds and other household furniture, excepting kitchen utensils.....	40.00	35.00
Saws and files.....	60.00	60.00
Other iron and steel tools weighing over 1 kilo.....	55.00	55.00
Kitchen utensils made of cast iron or steel, unpolished or coated with any other metal.....	10.00	10.00
The same when polished, galvanized, tinned, enameled, or with a coating of any other metal.....	25.00	20.00
Kitchen and household utensils made of iron or steel plates, unpolished.....	60.00	45.00
The same when polished, galvanized, or enameled, including those made of tin.....	100.00	80.00
Sewing needles, fishing hooks, and parts of watches, per kilo.....	4.00	4.00
Cutlery, per kilo.....	3.00	2.00
Scissors, per kilo.....	4.50	3.00
Short firearms and parts of same, per kilo.....	8.00	8.00
Other firearms which are allowed to be imported, and parts of same, per kilo.....	20.00	20.00
Copper of first fusion, and copper, bronze, and brass, in bars and ingots.....	16.50	16.50
Brass, bronze, and copper wire from 1 to 10 mm. gauge.....	49.00	28.50
Brass, bronze, and copper wire when finer than 1 mm. gauge.....	50.00	30.00
Copper, bronze, and brass sheeting.....	35.00	30.00
Silver-plated goods, per kilo.....	9.00	6.00
Articles for household use, of aluminium and its alloys, per kilo.....	5.00	3.00
Other articles of aluminium and its alloys, per kilo.....	6.00	4.00
Cocoonut and palm oil.....	8.00	8.00
Other vegetable oils, excepting olive oil.....	27.00	27.00
Sesame, flax, and other oil seeds, including copra or cocoonut.....	1.00	1.00
Animal products used in medicine.....	5.00	5.00
Liquid or solid vegetable dye extracts.....	5.00	5.00
Varnish.....	30.00	25.00
Writing ink.....	40.00	32.50
Printing ink and shoe blacking.....	25.00	20.00
Colors obtained from coal, per kilo.....	2.50	1.30
Superphosphates.....	.05	.05
Penic acid, naphthaline, and other similar antiseptics, per kilo.....	.60	.60
Alum.....	2.25	2.25
Caustic soda.....	3.00	3.00
Medicines containing sugar or saccharine, without alcohol, per kilo.....	4.00	4.00

Articles.	Tariff I.	Tariff II.
	<i>Pesetas.</i>	<i>Pesetas.</i>
Medicines containing sugar or saccharine, containing alcohol, per kilo.....	3.00	3.00
Wheat and rice starch and malzene.....	40.00	30.00
Starch for industrial purposes, including potato starch.....	3.00	2.40
Dextrin.....	5.00	4.00
Mineral and vegetable wax, in bulk.....	45.00	35.00
Stearin.....	35.00	25.00
Paraffin wax.....	35.00	30.00
Common soap.....	20.00	15.00
Perfumes, with alcohol, per kilo.....	5.00	4.00
Other perfumery and essences, per kilo.....	4.00	2.40
Raw cotton.....	1.30	1.30
Medicated cotton, per kilo.....	.50	.50
Paper in continuous sheets, white or colored, untrimmed, glazed or not, weighing up to 20 grams, inclusive, per square meter.....	45.00	35.00
Same, from 21 to 40 grams, per square meter.....	31.00	22.50
Same, from 41 to 50 grams, per square meter.....	11.00	8.75
Same, from 51 to 100 grams, per square meter.....	31.00	22.50
Same, more than 100 grams, per square meter.....	33.00	25.00
Common packing paper, of dyed or undyed pulp.....	14.50	10.85
White or colored paper, regardless of weight, handmade paper, and blotting paper.....	59.00	48.75
Photographic paper, kilo.....	3.00	2.00
Oak staves.....	.25	.25
Railway sleepers.....	.65	.65
Ordinary wood boards, from 40 mm. thick upward, cubic meter.....	6.00	5.00
Wooden casks for liquids, set up or in pieces.....	10.00	10.00
Other casks and packing cases, set up or in pieces.....	2.10	2.10
Bent ordinary wooden furniture, set up or in parts.....	100.00	70.00
Other ordinary wooden furniture, not carved or veneered.....	75.00	50.00
Furniture made of fine woods or veneered, when not carved or inlaid with metals.....	100.00	75.00
Same when carved or inlaid but not upholstered.....	180.00	150.00
Raw hides, dry.....	4.40	4.40
Raw hides, fresh salted or not salted.....	3.00	3.00
Glazed skins, per kilo.....	3.50	2.40
Tanned skins weighing over 9 kilos per dozen, per kilo.....	2.50	1.50
Leather belting, per kilo.....	3.00	2.00
Shoes, per kilo.....	12.00	8.00
Casings.....	20.00	20.00
Pianos, grand, each.....	325.00	325.00
Pianos, other, each.....	250.00	250.00
Surgical instruments, per kilo.....	5.00	5.00
Optical instruments, per kilo.....	10.00	10.00
Gold watches, each.....	20.00	15.00
Silver watches and those of other metals, each.....	4.00	2.00
Works of clocks and chronometers, per kilo.....	5.00	3.50
Typewriting machines and parts of same, per kilo.....	8.00	8.00
Phonographs, gramophones, and the parts of same, also the records, per kilo.....	10.00	7.00
Arc lamps and parts of same, per kilo.....	4.00	2.00
Incandescent electric lamps, per kilo.....	13.00	8.00
Agricultural machinery.....	10.00	10.00
Locomotives weighing over 35 tons.....	20.00	20.00
Engines weighing less than 35 tons, marine engines, and parts of same.....	35.20	35.20
Machine tools weighing up to 500 kilos.....	25.00	25.00
Machine tools weighing more than 500 kilos.....	24.00	24.00
Bicycles, per kilo.....	3.00	3.00
Frames of iron or steel, with or without wheels, mounted or not, without motors, for railway carriages and street cars.....	25.00	18.00
Same, with motors for street cars.....	60.00	50.00
Same, weighing up to 1,000 kilos each, for ordinary vehicles.....	100.00	80.00
Same, weighing more than 1,000 kilos each.....	120.00	100.00
Motor cars with two seats, each.....	1,400.00	1,400.00
Automobiles, open, with or without motors, each.....	(a)	(a)
Same, closed, each.....	(b)	(b)
Automobile wagons for freight.....	50.00	40.00
Motor boats, per ton measurement.....	17.50	17.50
Hams, salt pork, bacon, and lard.....	50.00	50.00
Butter margarine.....	85.00	70.00
Dried cod.....	36.00	24.00
Wheat.....	8.00	8.00
Wheat flour.....	14.00	14.00
Corn.....	2.25	2.25
Sugar, glucose, etc.....	85.00	85.00
Coffee beans from Fernando Po.....	105.00	105.00
Coffee beans from other countries.....	140.00	140.00
Milk preserved without the addition of other substances.....	100.00	100.00
Canned meats.....	40.00	25.00
Sardines in tins, per kilo.....	.40	.25
Other alimentary preserves, sausages, mustard, and sauces, per kilo.....	2.00	1.50
Cheese, per kilo.....	.80	.60
Rubber shoes, per kilo.....	4.00	3.00

^a Duty on frame according to weight, plus 200 pesetas.

^b Duty on frame according to weight, plus 320 pesetas.

FRANCE.

CHANGES IN THE GENERAL RATES.

The following changes in the general tariff of France have been effected by the decree of July 18, 1906. The changes affect only the general rates and will therefore not apply to those imports from the United States which are entitled to the minimum rates, in virtue of the commercial treaty between the United States and France. The minimum rates applying to imports from the United States are marked by an asterisk (*).

Tariff number.	Articles.	Unit of quantity.	Rates of duty.		
			General.		Minimum.
			Old.	New.	
			<i>Francs.</i>	<i>Francs.</i>	<i>Francs.</i>
Ex. 46	Fish, dried, salted, or smoked, other.....	100 kilos....	30.00	50.00	25.00
47.....	Fish preserved naturally, pickled or otherwise prepared.	.....do.....	30.00	50.00	25.00
49.....	Lobsters:				
	Fresh.....	.....do.....	20.00	40.00	15.00
	Preserved naturally or prepared.....	.....do.....	30.00	40.00	25.00
83.....	Potatoes.....	.....do.....	.40	3.00	.40
Ex. 84	Table fruits, fresh:				
	Lemons, oranges, cedrats and their varieties, not separately mentioned.	.....do.....	8.00	15.00	*5.00
	Mandarin oranges.....	.....do.....	15.00	25.00	*10.00
	Carob beans.....	.....do.....	2.00	4.00	1.50
	Common table grapes.....	.....do.....	12.00	25.00	*8.00
	Ordinary wine grapes, residue of grapes.	.....do.....	25.00	35.00	12.00
	Must—				
	Up to 12° Baumé, in casks or otherwise.	.....do.....	25.00	35.00	12.00
	Above 12° Baumé and up to 20° 9.	.....do.....	15.50	35.00	15.50
	Almonds, figs, and melons.....	.....do.....	5.00	15.00	*3.00
85.....	Table fruits, dried or drained:				
	Figs.....	.....do.....	6.00	25.00	2.00
	Raisins.....	.....do.....	25.00	35.00	15.00
	Almonds and hazelnuts—				
	In the shell.....	.....do.....	6.00	25.00	3.00
	Shelled.....	.....do.....	12.00	35.00	6.00
	Nuts—				
	In the shell.....	.....do.....	6.00	25.00	Free.
	Shelled.....	.....do.....	12.00	35.00	Free.
Ex. 86	Gherkins, cucumbers, olives, picholines, and capers, candied or preserved.	.....do.....	10.00	20.00	8.00
Ex. 87	Green aniseed.....	.....do.....	20.00	30.00	15.00
87 bis.....	Dried raisins, figs, and dates, intended exclusively for distilling or the manufacture of wine.	.....do.....	40.00	75.00	25.00
Ex. 110	Fixed oils:				
	Pure olive oil—				
	Intended for the manufacture of soap.	.....do.....	5.00	10.00	3.00
	Other.....	.....do.....	15.00	25.00	10.00
124.....	Liquorice juice.....	.....do.....	12.00	20.00	10.00
Ex. 158	Vegetables, fresh.....	.....do.....	8.00	15.00	6.00
171.....	Wines produced exclusively by fermentation of fresh grapes:				
	Of 12° and below.....	Hectoliter (liquid).	25.00	35.00	12.00
	Of 12° 1 and above.....	.....do.....	^a 25.00	^a 35.00	^a 12.00
174 bis.....	Liqueurs.....	.....do.....	90.00	125.00	80.00
174 quater.	Mineral waters.....	100 kilos....	Free.	20.00	Free.
Ex. 267	Glycerine, distilled.....	.....do.....	10.00	20.00	7.50
277.....	Sulphuret of arsenic.....	.....do.....	3.75	10.00	3.00
495.....	Jewelry:				
	Of gold and platinum.....	Kilo.....	10.00	40.00	5.00
	Of silver or silver plated with gold.....	.....do.....	10.00	10.00	5.00
	Goldsmiths' wares:				
	Of gold and platinum.....	.....do.....	10.00	20.00	5.00
	Of silver and silver plated with gold.....	.....do.....	10.00	10.00	5.00

^a For first 12°, and for every additional degree or fraction, an amount equal to consumption duty on alcohol.

Tariff number.	Articles.	Unit of quantity.	Rates of duty.		
			General.		Minimum.
			Old.	New.	
Ex. 611	Basket wares:		<i>Francs.</i>	<i>Francs.</i>	<i>Francs.</i>
	Of raw vegetable products	100 kilos	10.00	20.00	8.00
	Of wood shavings .....	.....do	10.00	20.00	9.00
613.....	Cordage of esparto, lime-tree bark and reed.	.....do	5.00	10.00	8.75
632.....	Cork, wrought:				
	Stoppers—				
	50 mm. and more in length.....	.....do	36.00	50.00	27.00
	Less than 50 mm. in length.....	.....do	27.00	50.00	20.00
633.....	Cork otherwise wrought .....	.....do	6.00	8.00	5.00
Ex. 643	Fans and hand screens:				
	Of wood and paper.....	.....do	350.00	600.00	800.00
	Of wood and stuffs or feathers, mount- ed or not.	.....do	500.00	800.00	400.00

SOUTH AFRICA.

CATALOGUES DUTIABLE—INCREASED COST OF LIVING.

An effort is to be made in South Africa by the Chamber of Trade at Johannesburg and other bodies to secure the exemption from duty of catalogues mailed to any of the South African colonies. At the present time the duty is 4 cents a pound, and a registration fee of 12 cents per packet is charged, the alleged purpose being to protect the local printers.

The new tariff will raise the cost of living considerably, as shown by the secretary of the Johannesburg Chamber of Commerce, who has given out the following list of charges paid on a consignment by a large firm of soft-goods importers, all the goods mentioned being of British make and entitled to the differential allowed to British goods. (£1=\$4.86; 1s.=24 cents.)

Cases.	Value.	New tariff.	Old tariff.	Cases.	Value.	New tariff.	Old tariff.
	£	£ s. d.	£ s. d.		£	£ s. d.	£ s. d.
1 bootlaces	7	0 16 8	0 10 6	2 shirts	34	4 1 4	2 11 0
6 rugs	76	16 14 5	14 15 10	2 Chinese shoes.....	25	7 13 0	1 17 6
4 hats	80	9 14 10	6 0 0	1 lace.....	32	3 16 8	2 8 0
16 canvas shoes.....	89	29 14 0	6 6 0	1 shirts	24	5 5 7	4 10 0
6 boots	74	8 17 7	5 11 0	3 clothing	55	6 11 9	4 2 6
1 clothing.....	26	3 2 1	1 19 0	1 hosiery	31	8 14 2	2 6 6
4 boots	62	10 16 6	4 13 0	1 sundries	41	5 15 2	4 2 0
2 hats	42	5 0 7	3 3 0	2 calico.....bales..	32	3 16 7	2 8 0
5 boots	58	8 15 1	4 7 0	2 tablins.....do....	36	4 6 2	2 14 0
5 hosiery	103	12 6 10	7 14 6	5 rugs.....do....	86	18 18 5	16 2 6
10 boots	165	19 16 0	12 7 6				
2 clothing.....	33	3 19 1	2 9 6	Total .....	.....	193 12 0	112 8 10

The increase is at the rate of 72 per cent, and all the goods are necessities. After September 1 the reductions in the railway rates will slightly improve the position.

The increase in the tariff on 100 bags of flour from America and Australia is £1 3s., or 5½ cents per bag of 100 pounds. Of United States and Australian flour, the imports last year amounted to 65,827,277 pounds.

CHARGES ON CATALOGUES CAUSES PROTESTS.

Consul-General H. L. Washington, of Cape Town, reports that under the new South African schedule, in which catalogues and price lists are subject to a duty of 25 per cent or 4 cents per pound, whichever shall be the greater, it was thought by the general public that this applied to catalogues, etc., printed abroad for the local merchants, but by a recent decision of the controller of customs it applies to all catalogues, etc., sent by foreign firms as well, and now all publications of this description, including single copies coming through the post are held for duty. A minimum charge of 1d. (2 cents) is made, and, in addition to the duty, a clearance charge of 6d. (12 cents) has been levied on each package containing one or more catalogues or price lists coming through the post, thus making the minimum tax 7d. (14 cents). Temporarily, and pending a probable conference on the subject, since so many protests have been entered, the clearance fee of 6d. (12 cents) has been suspended, but the direct duty is still collected. All matter of this nature sent by American firms to this consulate is held to be dutiable.

This interpretation of the act has, as stated above, occasioned many protests. This office has received a letter from a Cape Colony correspondent of the National Association of Manufacturers of the United States upon this subject, and he is of opinion that it would result in many catalogues, price lists, etc., being refused by the parties addressed. He inclosed a weekly quotation sheet of prices from a well-known New York exporting firm, upon which he had been obliged to pay duty, as have all other addressees, this office included, in similar instances.

FREE IMPORT OF FLOUR FOR TRANSVAAL.

The Transvaal request for their consent to the suspension of the wheat and flour duties in the Transvaal has been assented to by all the other parties in the South African Customs Union, states London Commercial Intelligence. In reply to the collector of customs, the Johannesburg Chambers of Trade and Commerce have recommended that suspension shall take effect from September 1. From 60,000 to 80,000 bags a month are consumed on the Rand, the duty having been 60 cents a bag. The suspension is for one year and will not apply to the Orange River Colony. A government bill to suspend duties in Natal has been introduced. The Cape Colony millers contend that they should be compensated by a railway preference.

SOAP ADMITTED FREE.

The Natal Government Gazette announces that a rebate of the whole of the customs duties will be allowed upon soap and other substances imported for and used exclusively in connection with the industry of wool washing in that south African colony.

CUBA.

FREE ENTRY FOR FUEL OIL.

Mr. Edwin V. Morgan, minister to Cuba, under date of July 9, explains that in a former report on an increase in the duty on starch,

it was stated that the enhanced charge was related to a project for placing crude petroleum, known under the name of fuel oil, on the free list. The minister says:

In the discussion of the bill it was alleged that cheap fuel oil was especially needed as a substitute for wood in order to prevent the further deforestation of the hills, which has already proceeded sufficiently far to threaten to affect the climate unfavorably and to injure the fertility of certain agricultural sections. Fuel oil, according to weight, costs less than wood and is handled more easily and cheaply; it gives 25 per cent more heat than hard coal and four more times than wood and freight on it is one-half less than on these two articles. Certain plants also, such as "marabu" and "bilijagua," which are seriously detrimental to the fields that they overrun, can be destroyed by its use.

Petroleum at present is not imported as a manufacturing fuel, and the customs tariff does not take cognizance of it in that character. Crude oil derived from schists, including crude petroleum and axle grease for cars and carts, pays \$1.40 per 100 kilograms; and other mineral oils, rectified or refined, intended for illumination or lubrication, pay \$3.50 per 100 kilograms. Military order No. 97, series of 1901, authorized a reduction of 50 per cent on crude petroleum imported for the purpose of manufacturing gas, a reduction which is also enjoyed by cordage oil under section "a" of Paragraph VII, "imported by and used exclusively for cordage works in their manufacture of rope and cordage, provided that the importation be made at the direct demand of the president of the cordage company, and that the latter submit their works at all times to the inspection of the customs authorities, and that the importer gives such bond as may be thought necessary by the acting collector."

Should crude petroleum for use as fuel in cane mills be granted this reduction the desired object can not be obtained, and for that reason it seems expedient to place it on the free list.

TEXT OF THE BILL.

Following is the text of the bill which passed the House during the late session of Congress and which is not unlikely to be approved by the Senate at the approaching session:

ARTICLE 1. Crude petroleum, called in English "fuel oil," is hereby declared free of customs duties upon importation, provided that it be introduced as a combustible for the manufacture of sugar, or for use as an insecticide or germicide, and for the destruction of harmful plants, and is imported by agriculturists or sugar planters.

ART. 2. Said fuel oil shall be imported in sailing vessels or in tank steamers, and its density shall not exceed 25 Baumé (9.045 specific gravity).

ART. 3. Shippers under authorization of the executive, and who fulfill the requisites called for in such authorization, are exempt from the provisions prescribed in the foregoing article, provided that the petroleum imported does not exceed 100 gallons in any one receptacle.

ART. 4. The executive shall issue the instructions he deems necessary for the exact fulfillment of this law, and shall say what plants are to be classified as harmful for the purposes of the same.

ART. 5. This law shall take effect upon the day following its publication in the official gazette.

BRAZIL.

TWENTY PER CENT REDUCTION TO NORTH AMERICA.

Deputy Consul William R. Cox forwards from Para the following custom-house notice of that Brazilian port:

The inspector makes public a reduction of 20 per cent of the import duties on the following articles produced in North America which shall be entered in Brazil for consumption: Wheat flour, condensed milk, manufactures of India rubber under article 1033 of the tariff (rubber and celluloid, gutta-percha, basins, funnels, capsules and bottles, walking sticks, canes, whips, etc., pouches, dolls and toys of all kinds, buttons, boots, engine packing, combs, rulers, penholders, fans, belts, braces, garters, cords and tapes, dentist's rubber, sticks, tubes and branches for flowers, rubber sheeting, tubes, threads, sheets, and mats), inks under article 173 of the tariff except writing inks (but including marking ink, designer's ink, drawing ink, and other liquid inks, and printing inks in tubes or cylinders), varnishes, typewriters, ice boxes, pianos, scales, windmills, watches, and clocks.

ECUADOR.

MATCHES, CIGARETTE PAPER, AND GUNPOWDER NOW ADMITTED.

The Government of Ecuador has abolished the monopoly in matches and cigarette paper, also of sporting gunpowder, which has been in existence over thirty years, according to the British representative at Guayaquil. Importation of these articles into Ecuador is now permitted, subject to the payment of the following duties:

Matches, 70 centavos net per kilogram (about 15 cents per pound); cigarette paper 10 centavos gross per kilogram (about 2 cents per pound); and sporting gunpowder 1 sucre gross per kilogram (nearly 11 cents per pound). The sucre is now worth about 48.7 cents, and 100 centavos equal one sucre. Surcharges amounting to 100 per cent of the import duties are also leviable. Special regulations may be introduced by the Executive or by municipalities to insure the safe handling of gunpowder. Sporting gunpowder may now be warehoused in the State gunpowder warehouse at Guayaquil for three months without charge to the importer; after that time a charge of 2 sucres per 100 kilograms per month will be made for warehousing.

PERU.

CHANGES AND MODIFICATIONS.

In the special tariff of the Peruvian department of Loreto, according to British authority, modifications of importance were introduced in June. The following are on the free list: Cattle on the hoof, craft whether propelled by steam machinery or otherwise in parts or whole, naval stores, coal, agricultural tools and machinery, rails and rolling stock, coined gold, books and educational requisites, copper, alembico, iron and copper pans weighing more than 46 kilos, tin cups and other appliances for the extraction of rubber.

HONDURAS.

PREPARATION OF INVOICES—ADMONITION ON PACKING.

Consul F. S. S. Johnson, of Puerto Cortes, calls attention to dangers consequent upon careless methods of invoicing goods destined for Honduras. He says goods may not be entered without a consular invoice, and that warehouse charges must be paid for the time between application for entry of goods and the arrival of an invoice. With regard to the requirements of an invoice he writes:

First. The invoice must contain the name of the port whence the shipment is made, the date, name of vessel, names of consignor and consignee, name of the port to which goods are shipped, and name of the person to whom directed.

Second. The invoice must state all marks and counter marks, the number, gross weight, and the contents of each package, specifying each particular article or fabric, carefully avoiding generalization, such as "cottons," "woolens," "hardware," etc.

Third. The invoice must state the total value of the merchandise, itemizing the value of each package, or lot of packages, of similar articles.

Fourth. The invoice must contain a declaration signed and sworn to by the interested party as to the weights and contents of the packages. The document must be in Spanish and executed in quadruplicate, one to be retained by the shipper.

There has been a good deal of complaint of late because of the neglect of our merchants to send the invoice along with the goods. Our people must bear in mind the expenses to which the importer is subject, and they ought to assist him by seeing that the consular invoice accompanies the goods, thereby saving extra charge for storage.

As to the matter of errors the weights, prices, and marks should be carefully compared with the list in the office to see that no errors have been made, for the correction of a consular invoice is not allowed after it has been issued by the Honduras consul.

I would recommend the packing of goods in canvas as it is lighter and not so liable to break as are the wooden boxes now used; besides it means a saving in customs duties, as duties are levied upon the gross weight of packages, and at least one month's warehouse charge must be paid on all imports.

As soon as goods are received at the custom-house and the consular invoice presented, five policies have to be made out on official-stamped paper by the importer or his duly authorized agent, together with two minor manifests signed by the steamship agent. The cost of these papers are \$2.25 Central American currency, or \$1.07 United States currency.

I am informed that a new tariff will be put in operation shortly in this country, and that it will in a measure affect some of the chief articles imported from the United States.

The complaint is general here as to the way our people pack their goods. More care should be taken. Goods coming here from Europe arrive in better condition than those from the United States.

Discounts equivalent to those given by European countries should be allowed.

Now that quarantine regulations permit passengers from this port, I would advise all firms desiring to extend their trade to Honduras to send salesmen to canvass this territory and secure the business before the foreigners get a footing.

NICARAGUA.

EXPORT DUTIES ON VALUABLE TIMBERS.

The following decree relating to export duties on timber was issued May 25, 1906, and amended by the decree of June 20, 1906:

Art. I. The export duty on woods in logs or cut shall be collected as follows, in American gold:

Mahogany (caoba), oak (roble), and cedar (cedro real), 1 peso (\$1) per ton or 1,000 square feet. Mulberry (mora), lignum vitæ (guayacán), quebracho, ñámbar, rosewood (palo de rosa), and genízaro, 50 centavos (\$0.50) per ton.

Art. II. This decree does not apply to contracts for which the rate of duty has been fixed.

Art. III. Woods not specified in this decree shall pay the duty fixed for those of nearest resemblance.

Art. IV. The present decree shall take effect upon its publication.

COSTA RICA.

DUTY ON WATERPROOF CLOTHING.

Consul Caldwell, of San Jose, reports, under date of August 7, that after September 1, 1906, the duty on oiled cotton clothing, used by laborers for protection against rain, will be 30 cents Costa Rica (\$0.139) per kilogram (2½ pounds).

JAPAN.

CERTIFICATE OF ORIGIN NOW NECESSARY.

The Japanese customs authorities announce that after October 1 next the new regulations requiring the production of certificates of origin on imports will be rigidly enforced. This certificate of origin must contain the marks, numbers, designations, numbers of packages, weights, and measurements of the goods, and the place made.

HOW ALASKAN SALMON MAY BE AFFECTED.

Consul-General Henry B. Miller writes from Yokohama in relation to his report on the new Japanese tariff bill that he placed a misconception on the import law on fish. His report read as follows:

Article 7, section 17, provides that fish gathered by Japanese vessels shall be brought in free. This will exclude American ships bringing salted salmon to Japan and confines the shipping of salmon from Alaska to Japanese sailing vessels and will operate as a discrimination against American shipping.

Mr. Miller continues:

I am now advised by the Japanese authorities to whom I have applied for a more definite interpretation of this section that the original law provides that the fish must be caught or taken by Japanese fishermen on board Japanese ships in order to secure free entry into Japan. Inasmuch as this is not permitted by American law in the waters of Alaska, fish that are purchased in those waters from local fishermen and brought over here in Japanese ships will have to pay the same duty as if brought in American or other ships, viz, 2 yen per 100 kin, or \$0.996 per 132.9 pounds (approximately \$1 per 133 pounds). In connection with this subject of salmon brought from Alaska to Japan I forward the views of Mr. E. J. King, American consular agent in Hakodate, who is considered the best authority in Japan on this subject. Mr. King says:

According to the Portsmouth treaty the Japanese are to have certain fishing rights in Russian waters. If they obtain these rights and are allowed to catch their own salmon in Russian waters then these salmon will enter duty free, with the result that the importation of salt salmon from Alaska to Japan will cease, as it will be unable to compete with salmon brought here by Japanese vessels. But as long as the Russians withhold the right to catch their own fish from the Japanese, American salt salmon is in the same position as all other salmon, excepting, of course, that taken in domestic waters.

If it is the desire of our Government to promote the export of dry salted dog salmon from Alaskan waters to Japan, it would seem to me that the simplest way to do this would be by letting the Japanese catch their own fish in Alaskan waters, charging them a tax on every dog salmon caught, and stipulating that no other kind of salmon be taken. There would be no trouble over this, as the habitat, etc., of the dog salmon is well known, and further, as they always run by themselves and do not mingle with sockeyes, king salmon, and other high-grade fish.

Dog salmon, outside of the Japanese market, have little, if any, commercial value in Alaska. They are not fit for canning purposes and at present are only caught for this market. As above stated, this will cease if the Japanese obtain the fishing rights which they expect from the Russians, but if Japanese were permitted to catch their own dog salmon in Alaskan waters there is no reason why they should not pay a tax of about 5 cents gold on each salmon caught, bringing in an annual revenue to the Alaskan territorial government of from \$50,000 to \$75,000.

AUSTRALIA.

AGRICULTURAL MACHINERY TAXED HIGHER.

According to an Associated Press dispatch from Melbourne, Sir William Lyne, minister of trade and customs, announced in the Federal Parliament that the import duties on stripper harvesters, plows, and different cultivators had been raised from the present duty of 12½ to 25 per cent. He said the provision had been made that if the selling price of similar machines made in Australia were raised above the prices of 1905 the collection of the additional duty might be suspended.

GERMANY.

NEW TAX ON CIGARETTES AND TOBACCO.

A new German law which came into effect July 1 changes the duty on cigarettes and cigarette tobacco and cigarette paper. The import rate on cigarettes and on fine-cut cigarette tobacco is fixed at 76 cents per pound. But fine-cut tobacco, the retail price of which (including the special tax) is higher than 33 cents per pound, is regarded as cigarette tobacco, except tobacco which is attested as not to be used in making cigarettes.

NETHERLANDS.

RATE ON MEDICINES CONTAINING SUGAR.

The Netherlands decree dated July 2 fixes the import duty on certain articles containing sugar as follows, the rate being per 100 kilograms (220 pounds): Medicines prepared with sugar (other than medical "small wares") for 10 to 50 per cent of sugar, 13½ florins (florin=40.2 cents); exceeding 50 per cent, 27 florins; succades, candied ginger, candied lemon and orange peel under 20 per cent sugar, 5½ florins; 20 to 50 per cent sugar, 13½ florins; 50 to 70 per cent sugar, 18 florins; exceeding 70 per cent sugar, 25 florins.

GREECE.

DUTY INCREASED ON MANY ARTICLES.

Minister Charles S. Wilson, of Athens, under date of July 23 last, reports concerning changes made in the Greek tariff during the last session of the Chamber of Deputies. He states:

The tax is increased on the following articles: Rice, coffee, lumber (sawn), corks, soaps of various kinds, boots, shoes, slippers, lasts, artificial flowers, artificial fruits, baskets, automobiles, and bicycles.

The increased duty on boots and shoes was demanded by the shoemakers as a protection against American shoes, the market for which is said to be increasing rapidly in Greece.

TURKEY.

USE OF THREE PER CENT INCREASE.

The Sublime Porte has accepted the Powers' joint demands with regard to the 3 per cent increase of the Turkish customs duties. An agreement is on the point of being concluded between the ministry of finance and the public debt administration, committing to the care of the latter the management of the receipts from this 3 per cent increase, on the same basis on which the debt administration is intrusted with the collection of certain tithes and of the sheep tax assigned to the service of the kilometric guarantees.

ROUMANIA.

GREEK MERCHANDISE SHUT OUT—FREE EXPORT OF HIDES.

According to a British Government publication, the Roumanian government has published a decree prohibiting the importation of all Greek merchandise, as a result of the denunciation of the Greco-Roumanian commercial convention of 1900. Certificates of origin are now required by Roumania from other countries of all articles of a kind produced in Greece, such as dried or salted fish, sardines, red mullet, olives, rosin, common soap, and olive oil.

Companies holding Roumanian concessions for the exportation of meat are now permitted to export, free of duty, bones, horns, and heavy tails, and other waste products, heads, skins, and the products of animals slaughtered in their establishments and intended for exportation.

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CONSULAR REPORTS.

The publications made up chiefly of reports from United States consular officers in foreign countries include the following:

COMMERCIAL RELATIONS, being the annual reports of consular officers on the commerce, industries, navigation, etc., of their districts.

REVIEW OF WORLD'S COMMERCE, being a summary of the annual reports contained in **COMMERCIAL RELATIONS**.

DAILY CONSULAR AND TRADE REPORTS, issued daily, except Sundays and legal holidays, for the convenience of the press, commercial and industrial organizations, manufacturers, etc.

MONTHLY CONSULAR AND TRADE REPORTS, containing miscellaneous reports from diplomatic and consular officers compiled from the daily.

SPECIAL CONSULAR REPORTS, containing series of reports from consular officers on particular subjects, made in pursuance to instructions from the Department.

The above consular reports were until July, 1903, issued by the Bureau of Foreign Commerce of the State Department; from that date until June, 1905, they were issued by the Bureau of Statistics of the Department of Commerce and Labor, with which the Bureau of Foreign Commerce of the State Department was consolidated July 1, 1903; since July 1, 1905, they have been issued by the Bureau of Manufactures, Department of Commerce and Labor. For details of these publications, the subjects of which the special reports treat, and the reports remaining for distribution, address "Chief, Bureau of Manufactures, Department of Commerce and Labor, Washington, D. C."

The publication of the reports on special subjects, in separate form, was begun in 1890. Those of the following titles are now available for distribution:

Vol. 2 (1890 and 1891).—Olive Culture in the Alpes Maritimes.

Vol. 15 (1898).—Part I. Soap Trade in Foreign Countries; Screws, Nuts, and Bolts in Foreign Countries; Argols in Europe; Rabbits and Rabbit Furs in Europe; Cultivation of Ramie in Foreign Countries.

Vol. 20 (1900).—Part I. Book Cloth in Foreign Countries; Market for Ready-Made Clothing in Latin America; Foreign Imports of American Tobacco; Cigar and Cigarette Industry in Latin America. Part II. School Gardens in Europe.

Vol. 23 (1901).—Part I. Gas and Oil Engines in Foreign Countries. Part II. Silver and Plated Ware in Foreign Countries.

Vol. 24 (1902).—Creameries in Foreign Countries.

Vol. 25 (1902).—Stored Goods as Collateral for Loans.

Vol. 26 (1903).—Briquettes as Fuel in Foreign Countries.

Vol. 27 (1903).—Markets for Agricultural Implements and Vehicles in Foreign Countries.

Vol. 29 (1904).—Macaroni Wheat in Foreign Markets.

Vol. 30 (1904).—Emigration to the United States.

Vol. 32 (1904).—Foreign Markets for American Fruits.

Vol. 33 (1905).—Industrial Education and Industrial Conditions in Germany.

Vol. 36 (1905).—Foreign Markets for American Cotton Manufacturers.

Vol. 37 (1905).—Machine-Made Lace Industry of Europe.

Vol. 38 (1905).—Insurance in Foreign Countries.

Reports of Special Agents:

Trade Conditions in Brazil.

Trade Conditions in China.

Trade Conditions in Cuba.

Trade Conditions in Japan and Korea.

Trade Conditions in Mexico.

Trade with China. Illustrated.

Of the **MONTHLY CONSULAR REPORTS**, many numbers are exhausted or so reduced that the Department is unable to accede to requests for copies. Of the publications of the Bureau available for distribution, copies are mailed to applicants without charge. In view of the scarcity of certain numbers, the Department will be grateful for the return of any copies of the monthly or special reports which recipients do not care to retain. Upon notification of willingness to return such copies, franking labels to be used in lieu of postage in the United States, the Philippine Islands, Hawaii and Porto Rico will be forwarded.

Persons receiving **CONSULAR REPORTS** regularly, who change their addresses, should give the old as well as the new address in notifying the Bureau of the fact.

In order to prevent confusion with other Department bureaus, all communications relating to **CONSULAR REPORTS** should be carefully addressed, "Chief, Bureau of Manufactures, Department of Commerce and Labor, Washington, D. C."

VALUES OF FOREIGN COINS AND CURRENCIES.

[As given by the Director of U. S. Mint and published by Secretary of the Treasury July 1, 1906.]

COUNTRIES WITH FIXED CURRENCIES.

Countries.	Monetary unit.	Value in U.S. gold.	Coins.
Argentina	Peso	\$0.96, 5	Gold—argentine (\$4.82,4) and $\frac{1}{2}$ argentine; silver—peso and divisions.
Austria-Hungary	Crown .....	.20, 3	Gold—20 crowns (\$4.05,2) and 10 crowns; silver—1 and 5 crowns.
Belgium	Franc .....	.19, 3	Gold—10 and 20 francs; silver—5 francs.
Brazil	Milreis .....	.54, 6	Gold—5, 10, and 20 milreis; silver— $\frac{1}{2}$, 1, and 2 milreis.
British N. A. (except Newfoundland).	Dollar	1.00	
British Honduras.....	do	1.00	
Chile.....	Peso .....	.86, 5	Gold—escudo (\$1.825), doubloon (\$3.65), and condor (\$7.30); silver—peso and divisions.
Colombia	Dollar	1.00	Gold—condor (\$9.647) and double condor; silver—peso.
Costa Rica	Colon .....	.46, 5	Gold—2, 5, 10, and 20 colons (\$9.30,7); silver—5, 10, 25, and 50 centimos.
Denmark	Crown .....	.26, 8	Gold—10 and 20 crowns.
Ecuador	Sucre .....	.48, 7	Gold—10 sucres (\$4.8665); silver—sucre and divisions.
Egypt	Pound (100 piasters).	4.94, 3	Gold—5, 10, 20, and 50, piasters; silver—1, 2, 5, 10, and 20 piasters.
Finland.....	Mark .....	.19, 3	Gold—10 and 20 marks (\$1.93 and \$3.85,9).
France.....	Franc .....	.19, 3	Gold—5, 10, 20, 50, and 100 francs; silver—5 francs.
Germany	Mark .....	.23, 8	Gold—5, 10, and 20 marks.
Great Britain	Pound sterling ..	4.86, 6 $\frac{1}{2}$	Gold—sovereign (£) and half sovereign.
Greece	Drachma .....	.19, 3	Gold—5, 10, 20, 50, and 100 drachmas; silver—5 drachmas.
Haiti.....	Gourde .....	.96, 5	1, 2, 5, and 10 gourdes; silver—gourdes and divisions.
India	Pound sterling ^a .	4.86, 6 $\frac{1}{2}$	Gold—sovereign (£); silver—rupee and divisions.
Italy	Lira .....	.19, 3	Gold—5, 10, 20, 50, and 100 lire; silver—5 lire.
Japan	Yen .....	.49, 8	Gold—5, 10, and 20 yen; silver—10, 20, and 50 sen.
Liberia	Dollar	1.00	
Mexico	Peso ^b .....	.49, 8	Gold—5 and 10 pesos; silver—dollar ^c or peso and divisions.
Netherlands.....	Florin .....	.40, 2	Gold—10 florins; silver— $\frac{1}{2}$, 1, and 2 $\frac{1}{2}$ florins.
Newfoundland	Dollar	1.01, 4	Gold—\$2 (\$2.02,7).
Norway	Crown .....	.26, 8	Gold—10 and 20 crowns.
Panama.....	Balboa	1.00	Gold—1, 2 $\frac{1}{2}$, 5, 10, and 20 balboas; silver—peso and divisions.
Peru	Libra	4.86, 6 $\frac{1}{2}$	Gold— $\frac{1}{2}$ and 1 libra; silver—sol and divisions.
Philippine Islands...	Peso .....	.50	Silver—peso, 50, 20, and 10 centavos.
Portugal	Milreis	1.08	Gold—1, 2, 5, and 10 milreis.
Russia	Ruble .....	.51, 5	Gold—5, 7 $\frac{1}{2}$, 10, and 15 rubles; silver—5, 10, 15, 20, 25, 50, and 100 copeks.
Spain	Peseta .....	.19, 3	Gold—25 pesetas; silver—5 pesetas.
Sweden	Crown .....	.26, 8	Gold—10 and 20 crowns.
Switzerland.....	Franc .....	.19, 3	Gold—5, 10, 20, 50, and 100 francs; silver—5 francs.
Turkey	Plaster .....	.04, 4	Gold—25, 50, 100, 250, and 500 piasters.
Uruguay	Peso	1.03, 4	Gold—peso; silver—peso and divisions.
Venezuela	Bolivar .....	.19, 3	Gold—5, 10, 20, 50, and 100 bolivars; silver—5 bolivars.

COUNTRIES WITH FLUCTUATING CURRENCIES. ^d

Country and monetary unit.	Oct. 1, 1905.	Jan. 1, 1906.	Apr. 1, 1906.	July 1, 1906.	Country and monetary unit.	Oct. 1, 1905.	Jan. 1, 1906.	Apr. 1, 1906.	July 1, 1906.
Bolivia:	Cts.	Cts.	Cts.	Cts.	China—Continued.	Cts.	Cts.	Cts.	Cts.
Silver boliviano	44.1	46.5	47.8	48.0	Hongkong dollar	50.2	51.5	51.8	51.8
Central America:					Kiaochou	75.3	77.3	77.7	77.7
Silver peso	44.1	46.5	46.5	48.0	Nankin tael.....	71.6	75.5	77.5	77.9
China:					Ningpo tael.....	73.3	75.3	75.3	73.9
Amoy tael.....	72.4	76.3	78.3	78.8	Newchwang tael....	67.9	71.5	73.4	75.7
Canton tael.....	72.2	76.0	78.1	78.5	Peking tael	70.6	74.3	76.3	76.8
Chefoo tael.....	69.2	72.9	74.9	75.3	Shanghai tael	66.1	69.6	71.5	71.9
Chinkiang tael	70.7	74.5	76.5	76.9	Swatow tael	66.9	70.4	72.3	72.7
Fuchau tael	66.9	70.5	72.4	72.8	Takau tael	72.8	76.7	78.8	79.2
Halkwan (customs) tael.....	73.6	77.6	79.7	80.1	Tientsin tael.....	70.1	73.9	75.9	76.3
Hankow tael.....	67.7	71.3	73.3	73.7	Persia:				
Hongkong tael	(e)	(e)	(e)	(e)	Silver kran	8.1	8.6	8.8	8.8

^a The rupee, \$0.3244 $\frac{1}{2}$, 15 to the sovereign, constitutes the money of account.
^b Seventy-five centigrams fine gold.
^c Value in Mexico, \$0.498.
^d Coins of silver-standard countries are valued by pure silver content at average market price of silver for the three months preceding date of circular issued by U. S. Treasury Dept.
^e The "British dollar" has the same legal value as the Mexican dollar in Hongkong and Labuan.

DEPARTMENT OF COMMERCE AND LABOR
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OCTOBER, 1906

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MONTHLY CONSULAR *and* TRADE REPORTS

Washington, D. C.

OCTOBER, 1906

No. 313

AFRICA.

PROGRESSIVE EGYPT.

EAGER DEMAND FOR MODERN INDUSTRIAL MACHINERY.

GROWING INTERNATIONAL TRADE—INVITING FIELD FOR MANUFACTURES—MACHINES OF EVERY DESCRIPTION NEEDED.

Special Agent Charles M. Pepper has furnished an interesting and comprehensive report on trade conditions in Egypt which shows that the land of the Pharaohs has turned to modern methods for the development of its resources and is prepared to take its place among the most progressive of commercial countries. Mr. Pepper points out that the wonderful development that will follow the completion of irrigation projects will require a large amount of modern machinery of every description, including farm and industrial machines. His report, which follows, dated at Alexandria August 16, should be studied carefully by our manufacturers:

Egypt, in the commercial sense, is the most promising territory bordering the Mediterranean anywhere from the straits of Gibraltar to the Red Sea. The country is undergoing a remarkable process of development, and in the opinion of those well fitted to judge it will be many years before the culmination of the consuming and consequently the buying power of the inhabitants is reached.

For the principal articles of import the markets are substantially as accessible to the United States as to Great Britain, which has the largest share of the commerce, the difference in distance not being so important when ocean freights are considered as when the traffic is dependent on railway transportation. Moreover, Egypt ships a certain proportion of her leading product, long staple cotton, to the United States, not in competition with the American cotton, but as supplementary to it. Several times during recent years these shipments have nearly reached \$10,000,000, and the average for seven years, in United States figures, was \$7,758,657. For 1905 they amounted to over \$6,000,000 and for the first six months of 1906 the

total was a little under \$3,000,000. In return the direct shipments of goods from the United States rarely exceed \$1,000,000, and in some years they have fallen below \$500,000. This is not the full and exact measure of the commerce between the two countries, because some exports through England and the continent are credited as of European origin. Yet these are not heavy enough to affect the figures materially.

DEMAND FOR IMPORTED GOODS PROGRESSIVE.

Great Britain, which takes the bulk of the Egyptian cotton crop, returns as the output of the Manchester looms practically all the cotton goods that are received, and she also sends engineering machinery, railway material, farm implements, and other manufactured articles in large quantities.

If the foreign trade of Egypt were stationary, and the markets were settled in fixed grooves, a question might be raised whether it would be worth while for the manufacturers and exporters in the United States to enter into the competition with Europe; but since the demand for imported goods is a progressive one there is no reason why in the future Egypt should not take at least enough from the United States to balance her cotton shipments. That this prospect may be better understood I shall outline the basic situation of commercial Egypt before analyzing in detail the nature of the demand and the opportunities for American products and manufactures.

The population of the country is approximately 11,000,000, the latest unofficial statistics giving 10,600,000 natives and 200,000 foreigners of all nationalities. This is notably in excess of the estimates of a few years ago, but it indicates more thorough and accurate enumeration rather than a phenomenal increase in the number of the people. To this population should be added the 1,850,000 inhabitants of the Sudan. These are not yet consumers in a large degree per capita of foreign products,^a but the Sudan is marked for a comprehensive policy, under government initiative, of railway construction, irrigation, and public works, which means heavy purchases of machinery and similar material.

EXPANSION OF INTERNATIONAL TRADE.

The wonderful expansion of Egyptian international trade during the last ten years is very largely a growth in production and consumption per capita, resulting from stable political conditions, good administration, relief from confiscating taxation, advanced wages, and the prosperity which comes from enabling every individual to enjoy the proceeds of his own industry. Without entering into questions of

^a A British official in the Kordofan district of Sudan, commenting on the small demand for dry goods, used this language: "The trade will not increase until a greater demand is created for civilized manufactures by the advance of the native idea of the necessities of life, their power of purchasing being still far greater than their expenditure. Many an Arab owns 200 head of cattle and only one shirt."

European politics and the peculiar system under which Egypt has an international existence without a national life of her own, there is abundant testimony from observers who have been residents for a third of a century regarding the reforms which have so visibly raised the material condition of the fellaheen or native cultivators. But the figures of commerce are more convincing testimony that the prosperity is of the mass and not of a class. It is on this foundation that the value of the market in the future rests.

The steady advance of the foreign trade may be seen by the comparative returns of merchandise imported and exported for a series of years. The official customs returns are given in terms of the Egyptian pound, which has a slightly higher value than the English pound sterling. It is within a small fraction of \$5, and for convenience in all cases I have reduced it on the basis of \$5 United States currency.

	1895.	1900.	1905.
Imports	\$41,949,665	\$70,561,850	\$107,820,380
Exports	64,062,965	85,620,570	101,801,425
Total ...	106,032,650	156,182,420	209,621,805

From 1885 to 1895 foreign trade was almost stationary, the increase of imports for 1895 compared with 1885 being only \$1,000,000, and of exports \$1,500,000. During some of the intervening years the commerce showed a decrease, so that the average could not be said to have advanced. But from 1895 onward, each twelve months' period reflects a gain in imports, though the value of the exports did not always increase, the variation resulting from the rise and fall in the price of cotton.

DISTRIBUTION OF TRADE.

The distribution of the foreign trade of Egypt and its value as it exists to-day are shown in the customs returns for the calendar year 1905, which do not present any marked change as to countries of origin and destination from the returns of the years immediately preceding, and which therefore may be taken as indicative of the relative share of the various nations in the commerce. In the custom-house classification the United States is not distinguished from the other countries of America, but with the exception of coffee practically all the articles of American origin are from the United States, which is also the destination of the exports, with a few trifling exceptions. Tobacco, cigars, and cigarettes are not classed under general merchandise, because a drawback is given on tobacco imported and reexported in the form of cigarettes, the Egyptian cigarette industry being an important one. These imports and exports are of course included in the total trade.

AFRICA—PROGRESSIVE EGYPT.

The exhibit of the foreign commerce for 1905 is seen from the annexed tables:

Exports of merchandise, 1906.

Articles.	Great Britain and possessions.	Germany.	America.	Austria-Hungary.	Italy and Sardinia.	Spain.	Russia.	Turkey.	Other countries.	Total.
1.	\$417,025	\$11,780	\$350	\$19,720	\$39,930	.....	.....	\$14,380	\$4,010	\$602,635
2.	78,490	9,875	3,985	94,985	92,480	.....	165	357,845	10,065	641,160
3.	256,950	32,350	1,935	40,825	90,980	.....	480	4,920	1,655	444,485
4.	10,789,180	114,200	19,250	628,685	928,415	.....	79,860	856,785	106,080	13,652,285
5.	1,532,085	265,405	152,655	82,095	262,985	.....	48,840	497,400	162,660	3,148,000
6.	12,700	.....	156	16,985	7,940	.....	260	21,645	81,015	90,680
7.	81,255	1,170	330	465	8,145	.....	1,780	19,295	8,095	69,815
8.	2,455	1,805	385	325	790	.....	915	54,865	10,065	71,545
9.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
10.	1,810	160	.....	440	1,665	.....	280	1,615	5,400	11,860
11.	720	.....	.....	1,795	11,410	.....	120	117,100	4,185	135,985
12. Metals and metal manufactures.	82,065	385	4,885	3,440	2,085	.....	.....	21,815	8,660	74,545
13. Miscellaneous.	40,647,586	6,760,575	6,064,880	3,856,890	967,245	1,959,560	2,984,680	124,170	5,066,830	79,809,825
14. Miscellaneous.	88,780	65	.....	.....	6,020	.....	2,990	2,100	570	100,625
Value of merchandise exported.	31,360	15,090	9,490	7,985	11,060	.....	3,805	5,550	192,505	276,000
Value of cigarettes exported.	53,857,420	7,212,660	6,267,680	4,751,885	422,160	1,968,195	3,119,505	2,099,135	5,596,705	99,029,565
Total of exports.	54,524,680	8,686,750	6,289,440	4,955,865	8,514,240	1,966,505	5,215,480	2,099,135	5,828,765	101,801,425

A glance at this comparative exhibit shows the nature of the Egyptian market and the countries which supply it. Great Britain's lead is undisputed, especially in textiles, and she is also well in advance in iron and steel products. Coal, which is included with timber and woods in the customs category, is monopolized, and the annual coal bill of Egypt ranges from \$4,000,000 to \$4,500,000. A portion of the cereals and other foodstuffs are from the English possessions in the Mediterranean, but the leading item in this category is rice from the Far East, which exceeds \$1,500,000. Turkey, chiefly Syria and the provinces in Asia Minor rather than European Turkey, comes after Great Britain, with total exports in excess of \$15,000,000, of which tobacco amounts to \$2,000,000, live animals \$3,250,000, dried and fresh fruits \$1,700,000, and corn \$850,000.

FRENCH CONTROL FLOUR TRADE.

France has a very valuable market approximating \$12,000,000, divided among silk and other high-grade textiles, the finer iron and steel manufactures, and foodstuffs which exceed \$3,500,000. The Egyptian flour trade is under French control and mills in Alexandria are operated by French companies. Austria-Hungary has a valuable and widely distributed market which includes fine textiles, porcelains, glassware, paper, furniture, and sugar. Germany supplies many small lines and is making the greatest progress in iron and steel manufactures. Italy's trade is partly due to the numerous Italian colony—the largest of any European nationality—but the native demand for fine textiles, cereal products, and various minor articles is also met. The strong position Belgium holds in metals and their manufactures will be remarked. It is particularly noticeable in the detailed exhibit of railway material. Many Belgian firms are interested in contracts for public works and in private building enterprises, and this has helped the cement market.

Out of the insignificant total of \$2,438,425 imports credited to America a subtraction of \$937,890 for coffee has to be made in order to arrive at the approximate importations from the United States, which were in the neighborhood of \$1,500,000, but 1905 made a much better showing than several preceding years. The leading articles credited to the United States were petroleum, foodstuffs, timber and furniture, and machinery. Corn was the largest single item and amounted to \$400,000; petroleum reached \$215,000.

EGYPT'S EXPORTS.

Since the single article of cotton and its products forms from 87 per cent to 88 per cent of the Egyptian exports, a detailed analysis of the statistics is unnecessary. The countries of destination show the distribution of this crop and its value to each of them. Spain, which does not figure in the import statistics, is a customer for raw cotton,

the Barcelona and other mills taking it to the amount of \$2,000,000 to \$2,500,000 annually. The exact exports of raw cotton in 1905 were \$79,032,200, as compared with \$83,513,610 in the previous year. Washed wool and sundry linens make up the balance of the total under the category of cotton and textile industries. The by-products, cotton seed and cotton cake, are classified with the cereals. The cotton seed exported in 1905 was valued at \$8,570,055 and the cotton cakes at \$1,073,820, so that the total cotton yield for export was \$88,676,075. England takes all but a very small quantity of the cotton seed and cotton cake.

Among the other exports cigarettes amounting to \$2,500,000 and gum arabic to \$1,100,000 are important items.

STEADY MARCH OF COMMERCE.

That there is no halt in the steady march of Egypt's foreign commerce appears from the trade returns for the first six months of the calendar year 1906, which supplement the previous twelve months. These show total imports of \$52,567,895, an increase of \$5,431,465 over the same period of 1905. The exports reached \$55,773,300, and were \$7,723,540 in excess of the first six months of the preceding year. The increase was entirely in cotton, some other articles having shown a slight falling off.

These figures indicate a foreign commerce for the current year of not less than \$220,000,000, since importations and exportations are somewhat heavier during the last months of the year than during the spring and early summer. They also may be taken to foreshadow an equilibrium instead of the balance of trade against Egypt which was presented in 1905, since the increase in the value of the exports is greater than that of the imports. Of the exports from January to July, Great Britain took 49.2 per cent, practically her purchases during the similar period of the previous year; Germany increased her proportion from 9 per cent to 10.8 per cent; France bought 8 per cent as against 8.9 per cent in the first six months of 1905; Russia 6.6 per cent as against 5.2 per cent previously; Austria an increase from 5.4 per cent to 5.8 per cent, while America, taking less raw cotton, dropped from 6.2 per cent to 5.5 per cent. The exports as a whole do not indicate any material change in the relative position of Egypt's customers.

In the imports for this six months' period the heaviest increase was in iron and steel products, to the amount of more than \$2,000,000, and in cereals and foodstuffs. The latter category presents a growth of \$1,250,000. A falling off in cotton textiles exceeded \$500,000 and gave the Manchester mills some concern, but with this exception and a slight shrinkage in live animals and animal products, almost every article of import showed an increase. Great Britain shared less in the

enlarged purchases than most of her European competitors, securing only \$1,500,000 of the increase, yet it would not be safe to assume that this means a permanent lessening of her proportion.

BUSINESS WITH AMERICA.

With the United States and other countries of America the total foreign commerce of Egypt during the first six months of 1906 was \$4,379,550, the imports being \$1,292,300 and the exports \$3,087,250. The exports of raw cotton amounted to \$2,935,000, and gum arabic \$110,000. The imports of coffee were \$572,160, which would leave about \$700,000 to be credited to the United States. This includes corn to the value of \$165,000; petroleum, \$163,000; lumber, \$65,000, and machinery and iron and steel products \$155,000.

The statistics of importations and exportations for the last eighteen months, as given in the preceding tables and the condensed statements, are the measure of commercial Egypt. The economic situation of the country is that of a great stretch of rich agricultural territory less subject to the uncertainties of crops than most agricultural regions, because the irrigation from the waters of the Nile, which for ages have rendered the lands fertile, frees them from the dangers of drouth and now also from flood. The basic wealth of the soil is constantly increasing through the more thorough and equitable distribution of the waters of the great river by dams, canals, and storage reservoirs constructed on the most modern scientific principles.

VICISSITUDES OF THE COTTON CROP.

A question may be raised whether, since the dependence is so largely on a single crop, the cotton may not, through various causes, shrink materially in some years and leave the country in a bad plight, curtailing its purchasing power and crippling its ability to settle for goods bought abroad. The vicissitudes to which cotton cultivation is subjected—overcropping, deterioration in quality, less quantity per acre, ravages by phylloxera—are discussed very fully in official reports and also in the documents issued by the various commercial bodies and agricultural societies interested in the cotton trade. These conditions are not to be overlooked any more than are the world-wide factors which govern the rise and fall in prices. But among all these uncertainties it may be discerned that the market for Egyptian cotton always exists, and the local conditions which may affect production unfavorably for one or two years at a time are not continuous and do not lessen the value of the crop permanently. During a series of five-year periods extending from 1889 to and including 1904 the average annual exports of raw cotton were as follows:

1889-1894.....	\$44, 547, 680
1894-1899.....	45, 628, 390
1899-1904.....	70, 430, 419

The value of the cotton seed exported during these periods does not show a corresponding increase. The average from 1889 to 1894 was \$8,312,040; from 1894 to 1899, \$6,752,655, and since then it has risen in one year as high as \$10,250,000. But the increase in the value of the cotton crop as a whole is clear. The addition to the quantity produced has not been so marked, but with the larger areas that are being brought under scientific irrigation, as controlled and directed by the Government, the quantity produced is reasonably certain to show a gain. Sir William Willcocks, former Director-General of the Reservoir Service, and an eminent authority on irrigation, estimates that the cotton crop of Egypt can be increased from 6,000,000 hundredweight to 10,000,000 hundredweight.

POLICY OF THE BRITISH ADMINISTRATION.

The possible addition to the cotton crop and to other productive resources can be appreciated better after a brief explanation of the policy of the British administration in Egypt and of the plans and projects of the Khedive's Government, which is another name for English authority. The policy is paternal. It recognizes the lack of initiative in the native character and also the limitations on private enterprise and the necessity of the State undertaking projects of public works on a large scale. The railways that form the real commercial arteries for the whole country are owned and operated by the Government, which undertakes the construction of new lines somewhat in advance of the traffic that is in sight. The waters of the Nile and its tributaries are controlled by the State, which not only constructs the dams and the irrigation works, but regulates the use of the waters in the most minute particulars.

Many land and irrigation projects have been entered upon by private capital, and they are playing an important part in the development of the country, but they are incidental and ancillary to the government works. The policy of the State, as related to railways, irrigation, and other public works, is somewhat similar to that of the United States with reference to river and harbor improvements, except that there is no Egyptian congress to fix the amounts of the appropriations. But the needs of the different districts are gone into by the administrative officials, technical investigations are made like those presented by the Engineer Corps of the United States Army, the prospective resources available within a given period are estimated, and specific improvements are decided on. One obvious advantage is that contractors and dealers can fix with reasonable accuracy the probable demand for material.

Lord Cromer, in his report for 1905, discussing the policy as concerns railways, irrigation, and other public works, gives railroad construction the preference, among other grounds because of their utility in providing means for the transportation of material for dams and

reservoirs. The railway from Berber to the Red Sea, which was opened to traffic a few months ago, and which places Khartoum in direct connection with Red Sea ports, was the most important development of many years, but there has not yet been time to estimate its full influence, either in opening up the regions traversed or in the lowering of freights, for it is not fully settled that it will divert the traffic which now goes through Alexandria and Cairo up the Nile and across from Wadi-Halfa. But it is assumed that there will be a noticeable reduction in freight rates, enabling material of all kinds to be laid down in Khartoum much cheaper than at present. One estimate is that steel girders, which now cost \$50 a ton delivered at Khartoum, can be laid down there for \$35 a ton.

NOT PARTICULARLY BENEFICIAL TO EGYPT.

The impetus given by the will of the South African millionaire, Alfred Beit, to the "Cape to Cairo" project of Cecil Rhodes is apt to be felt more in other parts of Africa than in Egypt. The regions which for various reasons claim the fostering care of the Egyptian Government in building railroads are not those which would be benefited by filling in uncompleted links to join with other sections on the Cape to Cairo route, for water communication is already established along that route, and this is considered sufficient for transportation for many years to come.

Another broad scheme contemplates the ultimate connection of the railway systems of northern Africa with the Egyptian system by extending a line from Alexandria to Tripoli. But these projects are not of the immediate future. The railway policy of Egypt is a national rather than an international or inter-African one. The State railroads will be extended and prolonged with regard to domestic development. A disposition apparently exists to take over what are known as the Light railways which are spread through the Delta and the province of Fayoum. They are narrow-gauge lines, that serve the various plantations and partially act as feeders to the Government system, to which they turn over some freight and passenger traffic. Their rolling stock, which is of the lightest quality, requires frequent renewal, and should they in time be acquired by the Government sections of them would be more useful if converted into the standard gauge, with heavier rolling stock.

BRITISH JEALOUSY HURTFUL TO AMERICA.

American locomotives at one time had a foothold in Egypt, and American bridge builders were in high favor when, after the reconquest of the Soudan, they met General Kitchner's exacting requirements for promptness in bridging the Atbara River. Much resentment was shown by English firms, and the British administration was bit-

terly assailed for its lack of patriotism in awarding the contract to their rivals in the United States. The British bridge builders, while continuing their criticism, profited by the lesson and possibly learned something from American methods. It is possible, also, that the multiplicity of home orders rendered the American bridge companies indifferent to continuing the conquest of Egypt, for they seem to have made no serious effort since Atbara to secure contracts as against England and the Continent. Yet this work enters into the matured plans of the Government for future improvements and is well worth securing.

Rails for Egyptian lines have been supplied principally by Great Britain and Belgium. The conditions are said not to be favorable to American rails. But the mills in the United States supplied the rails for the railroads which have been constructed in the Holy Land, and the requirements are not dissimilar to those of Egypt. That the demand is a growing one is seen from the customs returns for the first six months of 1906, when the importations of railway and tramway rolling stock were valued at \$890,000, a gain of \$545,000 for the half year.

There was also a gain of \$150,000 in locomotives, of which Germany was the chief beneficiary. In view of this widening market it is not pleasant to recount the retreat of the American locomotive from Egypt. That it was retired by the manufacturers is a regrettable statement of facts. Very likely the plethoric home market made them indifferent to the criticisms of the Egyptian railway administration, but the technical tests to which the engines were subjected and the unfavorable reports made thereon are worthy of attention, for they may prejudice the market for American locomotives in other countries.

TESTS MADE OF LOCOMOTIVES.

In 1901 tests were made by the mechanical department between locomotives of similar weight and power, respectively, of British and of American design and make. The trials were complete as regarded coal consumption, and the results were declared to be unfavorable to the American locomotives. They did not, however, include the results with reference to the amount of oil used or the cost of repairs, and these comparisons were made subsequently. From the date of the trial up to the beginning of the present year the twenty engines under test averaged over 137,000 miles each and afforded reliable data as to consumption of oil and general repairs. This was the outcome:

Average cost per engine for 137,000 miles.

	Oil.	Repairs.	Total.
British	\$670	\$3,765	\$4,435
American	640	4,150	4,790

These tests were followed by others with locomotives of German and Austrian make and including coal as well as oil and repairs, the cost of the coal being estimated at \$5.50 per ton. The average mileage of each engine was 120,000 miles, and the total cost per engine for coal, oil, and repairs was: British, \$15,240; German, \$15,415; Austrian, \$15,875. The initial cost of the British engine was \$16,225, as against \$14,585 for the German and \$14,675 for the Austrian locomotive, so that, in the opinion of the experts of the mechanical department as regarded working and cost of maintenance, the three makes of engines were practically the same, the difference in favor of the British being equalized by the extra initial cost which was justified on the ground that the extra finish was well worth paying for. French locomotives also have been tested and have given satisfaction.

The results of these tests may again be commended to the attention of locomotive builders in the United States, not because of the amount of orders involved at present, but on account of the future market.

PURCHASE OF RAILWAY MATERIALS.

The contracts for railway material placed by the Egyptian Government during 1905 amounted to \$4,158,000, of which Great Britain received \$2,250,000; Belgium, \$1,077,000; Germany, \$432,000, and France \$100,000. The United States does not appear in the list at all, though out of the \$267,000 placed locally in Egypt it may indirectly have supplied a small quantity. The British orders included locomotives, freight and passenger cars, rails, and miscellaneous material. Belgium supplied freight cars, bridge material, and locomotive accessories; Germany, locomotives and accessories; France, oils, machinery, and wooden screws. For the current year the purchases probably will exceed those of 1905.

MILESTONES IN ECONOMIC PROGRESS.

In the creation of a permanent demand the irrigation works which have been carried out during the last ten years, and those which will be carried forward during the next decade, are the leading factor. They are the milestones in Egypt's economic progress, and they fix her position as a buyer of foreign goods. The most important of these works was the Assouan dam, 585 miles above Cairo, which was completed in 1902. This is a granite structure a mile and a quarter in length, thrown across the head of the Assouan cataract in one continuous straight line. The top is a roadway 13 feet in width, and the highest point of the dam is 120 feet. There are 140 undersluices, 23 by 6½ feet, for passing the floods and 40 uppersluices, 14 by 6½ feet, for passing the high-level water of the reservoir. At the west end, in the navigation channel, there are 4 locks, 260 by 38 feet.

The lock gates were chosen from the designs made by the United

States engineers in the plans prepared for the Nicaragua Canal several years ago. It is proposed to raise the dam 20 feet in height, at an estimated cost of \$2,500,000, with the expectation that this improvement will suffice for the perennial irrigation of 500,000 acres and add \$75,000,000 to the national wealth. This work was postponed until some theoretical engineering doubts could be solved and protection works be constructed in the form of a solid masonry up and down stream of the dam sluices, in order to protect the rock from the severe action of the water issuing through them. The protection works have gone forward satisfactorily, and the theoretical calculations regarding the stresses and the stability of the masonry dams do not seem to have impressed experienced irrigation contractors, so that the raising of the Assouan dam may be looked upon as certain to be undertaken by the Government.

IRRIGATION PROJECTS.

In addition to this improvement there are comprehensive plans for the storage and distribution of the waters in middle and in upper Egypt and for drainage in the delta, some of the latter being private projects. The Eads works on the Mississippi River are advocated by many of the Egyptian engineers. All these projects, but more particularly those of the State, have a special pertinence for the United States, in view of the Reclamation Service, and the experience there is constantly being drawn upon. A technical expert was sent to the United States and Canada to make special studies in connection with the White Nile of the different types of dredgers in use, since this river requires unusually powerful hydraulic dredgers.

While the irrigation projects of the Egyptian government are of the highest importance, the extent to which they may be supplemented by private capital must also be taken into account. A large part of the capital which has been going into newly organized Egyptian companies, or into increasing the stock of old concerns, is for land, irrigation, and drainage purposes. Some of these companies are purely speculative and are chiefly engaged in selling town lots, but it is to be observed that speculative concerns do not flourish except where sound investments offer the bait. The results of the State works and of some of the private enterprises in reclaiming lands make it possible to secure further and apparently inexhaustible capital for projects of this nature. The overinflation of values in some localities is one of the consequences, and that a collapse shall come is certain. But this collapse will not reduce the crop capacity of the reclaimed lands.

INCREASE IN NATIONAL WEALTH.

Striking illustrations of the increase in Egypt's national wealth through the added productive capacity of the land are given by Lord Cromer in his latest report.

In Middle Egypt an area of 251,000 acres of basin land was converted into a region of perennial irrigation.

In the Bahr Nazlah district of Fayoum Province 20,000 acres previously unirrigated and untaxed were brought under cultivation and a low estimate of their value is \$100 per acre or \$2,000,000 for the whole tract. In the same district several villages comprising an area of 25,000 acres which in 1898 was valued at \$25 to \$75 an acre is now, owing to irrigation, worth from \$75 to \$150 per acre.

In the Bahr Seilah district 26,764 acres previously uncultivated were brought into use, and are now worth at least \$100 per acre, or \$2,776,400.

In Rodah, Rubiyat, and Tamyeh villages an area of 43,848 acres has been increased by at least \$5,000,000.

Aside from other considerations of policy, the Government reaps a substantial benefit from bringing uncultivated lands into use, because the tax from this source amounts to \$5 per acre, while in the case of land already producing the revenue is enhanced proportionately to the increased value.

PROSPECT VALUE OF EXTENDED IRRIGATION.

As supplementary to these official observations I add a quotation summarizing the whole prospect. It is from Sir William Willcocks, former Director General of Reservoirs, whose estimate of the ultimate cotton production I have already quoted:

Egypt has a total irrigable area of 6,250,000 acres. Of this area, 250,000 acres, which are to-day inundated in flood and lie along the edge of the deserts, must continue to be inundated in flood for all time to prevent the sands of the desert from spreading over the Nile Valley. Their value is \$25,000,000. Four million acres are perennially irrigated. They have a mean value of \$225 per acre, and have a total value of \$1,100,000,000. Of the remaining 2,000,000 acres, two-thirds are irrigated only in flood and one-third is not irrigated at all. These 2,000,000 acres have a mean value of \$125 per acre and are worth \$250,000,000. The land of Egypt may be considered worth \$1,375,000,000 to-day. If it were possible to perennially irrigate the 2,000,000 acres which are without such irrigation their value would be increased by \$150 per acre or \$300,000,000 in all.

The problem before us is how to provide perennial irrigation to these 2,000,000 acres and so add \$300,000,000 to the wealth of the country.

It has been calculated that if each milliard of cubic meters of water stored in Egypt itself is sufficient to insure the conversion of 500,000 acres from flood to perennial irrigation, Egypt therefore requires reservoirs capable of storing 4 milliards of cubic meters of water.*

WIDE DEMAND FOR MACHINERY.

From the brief outline of the progress that has been achieved and of the further advance of irrigation works that is in sight, it is plain that the present and the future Egyptian market which should have

*The Nile in 1904.

the most attention is that for machinery. The demand is of a wide variety. An example of its scope and extent is found in one company, which is an alliance of 24 British engineering firms, who among them claim to cover all the requirements for mechanical and structural engineering in Egypt and the Soudan. Their list includes insulated cables, lifts, gas-power and other engines, bridge and engineering works, rubber manufactures, and railway cars.

Another importing firm which does not limit itself to Great Britain as the source of supply imports portable engines and boilers, corn and flour mills, threshing machines, vertical engines for driving electric dynamos, and centrifugal pumps from England; steam engines, electrical machines, leather belting, and centrifugal pumps from France, and occasionally a small consignment of mowing and reaping machines, harvesters, and rakes from the United States. Other houses handle road rollers, threshing and steam chopping machines, steam diggers, gas, oil, and alcohol engines, machine belting, steam and oil motor wagons, pumps, dynamos, forges, tool steel, carpenter tools, anvils, pulley blocks, lathes, brass and copper tubes, sheets, wire rods, and weigh bridges. A New York company, the International Engineering Corporation, lately has come into the field with a view to making a specialty of American machinery.

AMERICAN MANUFACTURERS EXACTING.

I have visited a number of the warehouses in Alexandria and Cairo where American machinery is advertised, but have found little of it in stock. In most instances the very frank explanation was given me that the manufacturers in the United States offered no encouragement for the introduction and sale of their goods. They were as exacting with firms whose credit was known all over Europe, and whose purchases run up into the millions, as with an unknown customer who had no established financial standing. The manager of one house told me that he bought padlocks and some minor hardware specialties in the United States and paid cash for them because he could not get them elsewhere, but after a few trials he made no further experiments with American machinery. He also said he had found the English steam plows more durable than those from the States.

But generally there was no complaint that the American machinery was not equal in quality to that of Europe. Some of the dealers thought that Egypt offered an unusually good field for American adaptibility in agricultural machinery. The country is a hot one. The laborer wants to obtain a maximum of result by the exertion of a minimum of physical energy. Heavy tools are an unnecessary tax on his strength. English implements are durable, solid, and massive. American manufacturers in other fields have shown that they can combine durability with lightness, but they have not chosen to do so

for the benefit of Egypt. There is also complaint of their indifference to finish, which is carried to the extent that their manufactures sometimes are taken for second hand goods. This is a very serious mistake in a country where appearance counts for so much.

LESSON FOR MANUFACTURERS.

The truth appears to be that the manufacturers of machinery in the United States, and in particular of agricultural machinery, have not yet realized that the Egypt of the twentieth century is not the Egypt of the Pharaohs. They disbelieve in the possibility of the land tiller changing from the methods of cultivation that have been followed for four thousand years. But the flail does give way to the threshing machine and the ancient water wheel to the artesian well and the centrifugal pump. Europeans who have been in the country for forty years note the transformation. The Government leads the way, and the private companies which are interested in securing the largest returns on their irrigation and land investments push the use of the latest and the most efficient machinery.

The unerring evidence of the growing market for agricultural machinery is found in the customs returns. Because of the importance of the subject the plan has been adopted of classifying separately agricultural machinery, which formerly was included under scattered heads. The classification, however, is not complete, since parts of machinery are not included. Yet a realization of the growth of the market may be had when it is stated that the importations during the six months from January to June 30, 1906, amounted to \$837,000, a gain of \$360,000 over the similar period of 1905. Of these importations Great Britain supplied \$464,000, Switzerland \$80,000, Germany \$25,000, and the United States \$15,000.

OPENING FOR AMERICAN FARM MACHINES.

I have been so much impressed with the opportunities of this market for agricultural machinery, and with the ignorance and indifference regarding it shown by American manufacturers, that since it would be impracticable to cover all the technical points in a report of this character I asked the manager of one of the importing houses to give me the benefit of his experience. He did so in the appended statement:

Egypt is a purely agricultural country, and therefore the necessary machinery and tools to cultivate Egyptian soil will find a ready demand. The Egyptian farmer is an ignorant type of man, and was, up to fifteen or twenty years ago, cultivating his land on the old system—the system which his ancestor used, namely, by hand, not using any machinery or tools to speak of. Since that time large numbers of Europeans and foreigners have made Egypt their home, naturally bringing with them their ways and methods of cultivating the land, which are up-to-date methods. The Egyptian farmer has been gradually educated to the use of some useful farm tools, but he still does not use altogether the up-to-date farm implements, or, in other words, the implements used by the American farmer.

The most useful and salable machinery in Egypt at the present time is steam engines, kerosene engines, suction gas-producer plants, centrifugal pumps, and flour mills. The steam engines in demand are the regular horizontal type, both in single and compound. The latter is never bought without a steam condenser. The regular English type of surface condenser is the type used here, and sometimes the simple engines are supplied with such type of condenser. Steam engines are also and largely sold in the portable and semiportable type. The portable is what is known here as locomobile. Both types are sold in the simple and the compound. The latter has the larger sale of the two.

Any of the above-mentioned engines are generally sold in Egypt for two objects. The first is to run a centrifugal pump, which may be erected on a canal or on an artesian well. The artesian wells are now attracting the attention of every well-to-do farmer, and hundreds of them have been drilled in the past few years. The second purpose is to run a flour mill (better known in Egypt as corn mill), or sometimes to run both centrifugal pump and flour mill. The flour mills used in Egypt are the regular burrstone, iron frame, English type. They are sold in single, double, and triple mills, built on one single base. Many of these mills are now being imitated by local foundries. The suction gas producer was introduced into Egypt two or three years ago. After the installation of a few plants in the country the actual proof of their fuel saving was demonstrated to the Egyptian farmer. He immediately took to it, and now many plants of such machines are to be found. The fuel expenditure on any machine is the primary question in Egypt.

AMERICAN FAILURE TO REALIZE CONDITIONS.

The American manufacturers do not seem to realize the importance of Egypt and consequently do not care to modify their machinery or tools to meet the local demand.

An American house in Alexandria specially established for the purpose of introducing American machinery, and thoroughly acquainted with the local conditions, found it necessary to handle flour mills. This house, having a buying office in New York, wrote immediately and asked that catalogues and prices of burrstone flour mills be sent at once. On receipt of the same they found that the mills offered by the American manufacturers were pretty near the same style as those made in England, except that they were built with wood frames instead of iron frames. This house wrote back that these mills could not be used as they were unless the manufacturers substituted iron frames and added to them a few simple modifications, promising if this were done that it could probably use at least a hundred of these mills a year.

After corresponding for fully three months the Alexandria concern was unable to convince one of the largest flour-mill makers in the United States that his mills were made of the best quality of material with an up-to-date pattern, and were better adapted for Egyptian purposes, which they claimed to know all about, and evidently knew very little, than mills that were desired.

INSUFFICIENCY OF AMERICAN MACHINES.

Centrifugal pump is another article which is sold almost every day in Egypt. The house above referred to handles a line of well-known American centrifugal pumps. These pumps are well made, but they do not in one way meet the demand of the Egyptian farmer, which is for a few inches larger suction than discharge. The American pump is made with suction and discharge of same size. The Alexandria house again took up the matter with their New York office, and with very convincing facts tried to induce the manufacturer to make his pump of larger suction than discharge, promising to buy a large quantity of the pumps if they were so made.

Again the Alexandria house met with its Waterloo and had to be content with the few sales it was able to get on this particular pump without the adaptation to Egyptian needs.

A peculiar thing about the American machines is the rough finish put on them, the little care given for their testing before shipping and real adjusting, and lack of instructions for erecting on arrival at destination. American steam engines of the ordinary type are considered in Egypt as secondhand machinery. This is simply due to the rough state in which they are sent. This is also true of many other American machines.

REQUIREMENT OF THE NEAR FUTURE.

The amount of machinery that is likely to be sold in the next few years is rather a difficult question to answer. Egypt is growing, and growing fast, too. There are at the present time three to three and a half million acres of land irrigated. For this there are fifteen to twenty thousand steam and oil machines in the country. According to government official reports there will be about two to two and a half million acres of land which will be suitable for irrigation in about four or five years—that is, after the Government makes preparation for storing large amounts of the Nile water during the flood season to be distributed on the two and a half million acres of land in summer days. In closing, and in a few words, the Egyptian market is well worth the attention of the American manufacturer as well as his time and money in modifying his machines and tools to suit the demand of the Egyptian farmer.

ELECTRICAL AND INDUSTRIAL MACHINERY.

The prospect for electric installation is a fair one, though Arab villages do not take to electric lighting with such avidity as do many other primitive communities. Besides Alexandria and Cairo, some of the largest towns are the main dependence, as are also the big plantations. Electric railways (trolleys) are being extended, and recently the main suburban line of Alexandria has changed from steam to electric power, in harmony with the tramway system of the city. Telephone and telegraph lines under the State are likely to be materially increased. One of the chief American electrical companies seeks business in Egypt through its European office. The importation of electrical apparatus is valued at \$750,000 yearly.

As regards machinery for the local industries growing out of native products, it can not be said that the opening is a particularly inviting one, though some sales are possible. The majority of the cotton-ginning mills were combined not long ago under a trust which closed several of them. The machinery is of English make, and much of it is antiquated. Four years ago the representative of manufacturers in the United States came to Egypt and after inspecting the machinery in use declared that his principals could replace it on advantageous terms. Apparently, however, the opportunity was not thought worth following up, for no further steps were taken and the machinery is still of the old style. New installation is certain before long, and it might pay the American manufacturers to look into the prospect again.

Machinery for cotton mills to manufacture the raw Egyptian product at home is not likely to be in great demand. Mills have been established in Cairo and Alexandria, but they are under a disadvantage. They are compelled to pay an impost or tax on their output equivalent to the 8 per cent ad valorem customs duty levied on imported cottons. This discourages capital from going into these enterprises and frees the Manchester mills from any prospective danger of competition by native Egyptian cotton factories. The installation of the mills that were started was made by European manufacturers.

SLOW PROGRESS FOR THE SUGAR INDUSTRY.

The market for sugar-mill machinery is not one that appeals to manufacturers in the United States. Refineries were established twenty years ago, and raw sugar is imported free of duty for refining, principally from Java and the Far East, but the quantity reexported is not large, in some years amounting only to a few thousand dollars. The country, while raising cane sugar and exporting some of the product, imports the beet root from Russia, Austria, and France. The Government by various measures seeks to encourage the growing of sugar cane and make it one of the leading crops, with the purpose of diversifying the agricultural industries and lessening the dependence on cotton. The industry received a check recently through the bankruptcy of one of the companies that had several million dollars invested and was seeking to raise and grind the cane and refine the sugar. A vast speculation was said to be the cause of the failure, but the conditions themselves were not favorable. How long a time will be required to recover from this setback is guesswork. But while the stimulus of the Government may encourage cane growing to the extent of an increased product, both for home consumption and for export, the building of plantation mills is not likely to be extensive. Such demand for machinery as may be created will be met by the Glasgow, Belgian, and French manufacturers.

MINING ENTERPRISES.

The widespread prospecting that is going on, and the large number of Egyptian mining companies which are floated in London, raise a question as to the prospective market for mining machinery. The Egyptian Government has established a Department of Mines, and in a vague way confidence is felt that there are valuable mineral resources to be developed. From the Sinai Peninsula and the borders of the Red Sea, where the ancient workings were known to exist, to the Nile Valley and the heart of the Sudan few districts are overlooked by the London companies. The prospecting is done under license or concession of the Government, and large areas have been turned over to the various corporations, but the tendency now is against locking

up large tracts and in favor of greater encouragement to individual prospectors—the “grub-stake” plan of the West.

It is the expressed opinion of the Director of Mines that the extent and distribution of the gold and other mineral belts are such as to warrant the expenditure of capital in their development, but that it will take at least ten years to prove the commercial possibilities of many of them. Promoters of the companies and individual prospectors are much more sanguine as to the certainty of the commercial returns and the shorter time in which this can be demonstrated. They appear to have little difficulty in securing the capital requisite for their ventures.

Up to this time the output of the mines which give promise of production has not been equal to the expenditure, though one company in the Nile Valley has taken out \$150,000 worth of gold, and the low-grade ore from the Sudan which has been exhibited in London has resulted in the investment of additional capital for exploiting the region from which the quartz came. Few Americans are prospecting in Egypt. Many of the English companies which have been successful in South Africa are in touch with the developments, and London is the best place for determining the possible future market for mining machinery.

DEMAND FOR AUTO AND MOTOR CARS.

The Egyptian demand for automobiles, motor cars, motorcycles, and even bicycles, is an increasing one. This applies not only to the cities of Cairo and Alexandria, where the more expensive machines are in favor, and where motor omnibuses and traction cars are in use, but also to the interior, where there are roads of a kind practicable for a certain type of cars, and where motorcycles and bicycles are used by the military officers. One United States company, the maker of a light runabout, established an agency in Egypt, but though a few of the machines were sold they did not find favor as against the French autos, which, while light, were more substantial. The French manufacturers almost monopolize the market, but there is complaint of the high prices, and several dealers have declared that a substantial American machine which could be marketed at a moderate price would be able to compete with the French machines in the cities, while in the country there is more than an even chance.

An official identified with the development of the interior makes these suggestions for the benefit of motor-car manufacturers:

A car of suitable design should embody the following details: Powerful engine, metal wheels, substantial gear box with high and very low gears, efficient radiation clutch to withstand frequent slipping, strong springs, weight suitably distributed on the frame, spare parts, carrying capacity for large supply of fuel and water, and a certain amount of luggage, and all working parts must be carefully inclosed as a protection against sand.

Rubber tires are in constant demand because the blazing Egyptian sun soon wears them out. The importations of automobiles and motorcycles in 1905 were valued at \$176,000.

SANITARY SUPPLIES AND HARDWARE.

Owing to the installation of public works by various municipalities, and to the construction of business blocks, hotels, and private residences, sanitary engineering is opening a valuable market. The filtration plant for Alexandria was put in by an American company, which is now installing waterworks in Tantah, a town of 50,000 inhabitants. The bulk of plumbers' supplies and sanitary appliances come from England, though there are some importations from France. An Ohio firm advertises bath cabinets for which the demand is good.

In household hardware American enterprise has not come up to its opportunities. Two or three makes of high-grade cooking ranges are kept in stock by local firms, and they have found favor in hotels and restaurants, but the permanent, growing, and profitable market is for oil cooking stoves. A United States manufacturer introduced an excellent oil cooking range, which was retailed at a moderate price. It sprang into immediate popularity and commanded a large sale. Other oil cooking ranges, similar in appearance and offered at a lower price, were soon in the market. They were said to be made in Germany. It has taken time to demonstrate that these ranges are inferior to the American make, but this has happened, and in the future with proper pushing American cooking ranges and portable stoves should be used in much larger numbers.

SEWING AND TYPEWRITING MACHINES.

The Singer Sewing Machine Company, which has taken the lead in building up export trade throughout the world, is established in Egypt and has followed the same policy as elsewhere. It has local agencies and appears to be well advertised. A cheaper machine is of German make. The demand for sewing machines, however, does not appear to be commensurate with the progress of Egyptian households in material comforts, and it possibly may be stimulated in the future.

The standard typewriters are in use to a limited extent. They are supplied direct and through the European agencies of the American manufacturers. Their use is not so extensive as the large number of commercial houses would warrant. This is in particular true of the smaller concerns. Offices which in Europe or the United States would have two or three typewriters, in Egypt have none. They are more common in the administrative offices of the Government, where the English officials have English clerks to transcribe their work. An Arabic typewriter, invented by an Egyptian, is said to have a fair sale.

Egypt is flooded with cheap watches of a very inferior make, some of which would better be sold by the ton as old junk than as time-keepers. Many of these are advertised as "American watches," though neither the works nor the cases are of United States manufacture. They are composed of cheap stuff put together in Europe and given a trade name which conceals the identity of the maker. One article of this kind was pushed quite extensively and was retailed at \$2, when 50 cents would have been a high price to pay for it. When its worthlessness was found out a prejudice was created against American watches. In Cairo a watch of Swiss origin is well advertised and is retailed at \$3, but the timepiece which is in demand costs more. Both the Bedouins and the fellaheen of the villages are fond of carrying good watches and will make sacrifices to secure them. I am assured that a good American watch, with the nationality and the maker's name distinctly stamped and the trade mark protected so as to be secure against imitations, which could be retailed at \$5 to \$7, or possibly as high as \$10, would find a permanent sale, especially if at the end of the warranted period it was still in good condition.

LUMBER AND HOUSEHOLD FURNITURE.

The construction of public works, not only the docks, wharves, quays, and piers at the ports, but also improvements of a more general character along the Nile and in the interior, has been very heavy during the last few years, and a point has been made that the demand for timber and lumber may decrease. This, however, does not appear to be the case, and with manufactured lumber an increase is certain. Egypt is treeless so far as timber for building purposes is concerned, since the 5,000,000 date palms and the few sycamores and acacias are not material for building or for manufactured woods. The country must continue to use the proceeds of its cotton crop in buying lumber and furniture abroad, and the United States has an excellent opportunity to contribute its proportion. At intervals it has supplied a portion of the lumber and timber used, and North Carolina pitchpine, one of the American missionaries informs me, is very well known in the interior, but as a whole the shipments from the United States have been spasmodic and irregular.

IMPORTS OF TIMBER AND LUMBER.

The value of the timber and manufactured lumber imported in 1905 was \$6,624,000, an increase of \$635,000 over the previous year. Norway and Sweden contributed \$2,447,000; Turkey, \$1,083,000; Roumania, \$847,000; Russia, \$783,000; Austria-Hungary, \$854,000, and the whole of America \$280,000, which indicates a picking up of the trade on the

part of the United States. Firewood to the amount of \$500,000 was imported from Turkey. The growing trade, however, is in furniture, the imports of which now exceed \$1,000,000 annually. In 1905 they were \$1,035,000, an increase of 18 per cent over the previous year, and for the first six months of 1906 they exceeded the same period of 1905 by a small percentage. Austria-Hungary, France, and Italy are the chief exporters of fine furniture to Egypt, while Great Britain supplies a proportion of the heavier articles. The imports from Austria vary from \$330,000 to \$350,000, while France ranges from \$275,000 to \$300,000.

HIGH GRADE OFFICE FURNITURE.

It is the concurrent testimony that in office and household furniture the opening is an excellent one for manufacturers in the United States.

The fine grades and decorative styles which are supplied by Europe always will be in demand by the wealthier classes, but they have not the possibilities of growth that have the more substantial articles manufactured in the United States, because the latter meet the needs of the classes whose ability to buy is increasing and who are demanding more material comforts for their dwellings. Office furniture is in very good demand. An Alexandria commission agent, who is trying to make a specialty of goods from the United States, informs me that there is scarcely a style of United States furniture which he can not sell when the manufacturers give him sufficient encouragement and do not ignore orders which to them are small, but which have great possibilities in making American furniture known to the Egyptian consumers. Roll-top desks have found their way into numerous offices and commercial houses in Alexandria and Cairo, and are also shipped as far as the Soudan. But the market is for all kinds of desks, tables, chairs, settees, and even for folding beds. However, the aggregate as yet is small. The total furniture importations from the United States in 1905 amounted to \$7,500 and the preceding year they varied only a few dollars. This year the showing will be better, for during the first six months the total reached \$10,000.

IMPORTS OF BREADSTUFFS.

The degree to which Egypt as an agricultural country feeds herself is shown in the tables of imports and exports cited earlier in this report. Some of the importations are puzzling, as, for instance, rice from the Far East to the amount of \$1,500,000, while Egyptian rice to the value of \$500,000 is exported to Turkey. But much of the commerce in food stuffs is inter-Mediterranean rather than international. Egypt exports to the neighboring countries lentils, beans, peas, onions, and various vegetable products. She also exports eggs to the value of \$500,000 annually. Her flour and wheat importations, as has been pointed out, are chiefly from France, with Russia second.

The dhurra or native corn of Egypt is not produced in quantities sufficient to feed the population and has to be supplemented by importations of maize; or as the article is called, "Turkey corn," which is in reality the Indian corn of the United States, and is known as white corn. In 1905 this product was imported from Turkey to the amount of \$500,000, though in the preceding year the total was only \$25,000. Similarly the importations from the United States were placed at \$405,000, as against none in 1904. The shortage in the native production of food stuffs is not so great this year, as is shown by a decrease of \$100,000 in the importations during the first six months, but the United States is holding a good share of the shipments, which for the period from January to June 30 were \$165,000. The market for Indian corn now appears to be a fairly stable one, and in August a ship was chartered in Baltimore especially for this cargo, with the intimation that others would follow.

PROVISIONS AND PACKING-HOUSE PRODUCTS.

With reference to the Egyptian importations of provisions and packing-house products it is difficult to trace the country of origin with precision. Of the salted and canned meats, which are included in the customs category of animal alimentary products, a small share may be attributed to the United States through transshipments at Liverpool by English firms, particularly those which supply the British garrison. But the total amount credited to England rarely exceeds \$100,000 annually, with a similar sum for salted fish. There are no direct imports from the United States. Salted fish is imported principally from France and Portugal. Turkey supplies the live animals, including camels, horses, mules, as well as cattle, sheep, and goats which enter into the food consumption. Turkey also supplies butter and cheese.

COTTON GOODS AND YARNS.

Textiles, and particularly cotton goods, do not offer so expansive a field for new trade as do machinery and similar manufactures. The business is an old established one and is concentrated in a few hands. However, taken from year to year, the market shows growth, though stocks carried over from one year to another may make it appear that there has been no increased consumption. The annual imports of cotton tissues are not less than \$15,000,000, which was the total for 1905, though the first six months of 1906 showed a loss of \$500,000. Cotton yarn importations reach \$1,250,000 annually. Great Britain supplies approximately 80 per cent of the yarns, but has to meet competition from Italy, whose sales average \$200,000 to \$220,000. Germany and Belgium have a very small fraction of this trade.

In cotton tissues England is supreme. During the last year out of

the total of \$15,000,000 her share of the trade was \$13,600,000. Austria-Hungary was a competitor to the amount of \$250,000, but Italy's shipments exceeded \$600,000. This was not so large by \$100,000 as during the previous year. Yet it was large enough to indicate that Italy has gained a foothold in the cotton trade of Egypt, and the Manchester mills are viewing her prospective competition with some distrust.

POPULAR TASTE FOR PATTERNS.

The Arab consumer is very fond of bright colors, and the printed calicoes manufactured for his benefit are brilliant hued. Discriminating taste, however, is often shown, and flashy goods do not meet with lasting favor. The Arab also judges the textile by its weight, and if to his handling it appears too light he rejects it. The Italian mills have recognized these peculiarities, and their patterns show discrimination both as to colors, designs, and weight. The native mills, located in Alexandria and Cairo, aim to produce a brown cloth, as they do not expect under present conditions to compete with the Manchester colored prints.

Cotton mills in the United States can judge from the samples forwarded to the Bureau of Manufactures with the jobbing prices and other details what their chance would be for entering the Egyptian market in competition with Manchester and Italy. The value of the trade in cottons may be understood from the statement that the imports of tissues, mixed fabrics, and yarns exceed iron and steel products by \$4,000,000.

SILK AND WOOLEN FABRICS IN FAVOR.

Clothing the people of Egypt is not limited to supplying them with cotton fabrics. Linens, mixed woolens, and silks have a large market. The increase in silks has been very notable. A recent report of the French Chamber of Commerce of Alexandria commented on the purchases of silks in the smallest villages where the fellah buys these goods to be made into garments for his wife and children at least once a year.

On the two great religious festivals of the Mohammedans, sometimes translated into English as "Easter Sunday and the other Easter Sunday," every family is decked out in finery, much of which is substantial and costly. American manufacturers would not be likely to find a market in Egypt for fine dress goods in competition with Italy, France, and Austria, but they might do something in ordinary wearing apparel if they could undersell Germany in ready-made clothing. German competition in wearing apparel is making headway against British goods.

It has been suggested to me that hat manufacturers in the United States might find an opening in supplying the tarbouche or red Turkish fez. This is of universal use not only among the Mohammedan population, but with the Syrians and many Europeans, including Greeks and Italians. While the tarbouches are made on a small scale locally, most of them are imported from Austria, Algiers, and Great Britain. Samples have been forwarded the Bureau of Manufactures.

OPPORTUNITY TO SELL FOOTWEAR.

I desire to emphasize in the strongest possible manner the opportunity for the sale of American shoes if proper effort is made. A member of the American Mission, with the advantage of thirty years' experience among the inhabitants of middle and upper Egypt, called my attention to the increase in the use of foot wear by all classes. It was so universal that he looked upon it as marking a distinct step in civilization. In his opinion the barefoot Bedouin pressing the scorching desert sands would soon be a figure of the past, but he gave more importance to the townspeople and the villagers who a generation ago did not wear shoes because the money to buy them was lacking. Other observers confirm the view taken by the missionary.

The cobbler shops in the Greek and other European quarters of Alexandria and Cairo do not give the true idea of the market for foot wear. Nor do the stores which supply the Europeans and the wealthy classes of Arabs who have lived in Europe. Hand-made shoes, slippers, and even sandals, are giving way to the machine-made article, which can be bought much cheaper. The American shoe factory seeking Egyptian trade would do well to send one of its superintendents to the native quarters of Cairo—the Boulac, for example—where the handicraft is carried on. He would there learn the native needs and peculiarities, and would note a resemblance to the specialities to which American factories are now devoted. He would also see why the machine-made shoe is certain to displace the native article.

SHOE FACTORY STORES.

The American shoes heretofore introduced have been well received in Egypt. Some places advertise custom-made shoes after American patterns, but this is only for a limited trade. In several places the shoes are displayed in the shops with those of English and French make and the product of standard factories in the United States are to be had. A few well-known makes are displayed specially. But all this is in the European sections of Cairo and Alexandria and does not reach the much larger body of native buyers.

So far as I have been able to learn no factory handling its own man-

ufactures exclusively and pushing them by means of its own sales stores has adopted this system in Egypt, though it probably would be as successful as in Mexico and other countries where it has been tried, and would help to make American shoes better known to Egyptian buyers. But the field is a much broader one than for factory sales stores alone.

The total imports of boots and shoes at present is between \$650,000 and \$700,000 annually. Last year Great Britain contributed \$155,000, Austria-Hungary \$100,000, France \$25,000, and the United States \$15,000. For the first six months of the current year the importations from the United States were about equal to the previous twelve months, so that the trade may be said to be looking up. Hides and leather are imported from Great Britain, Austria, Germany, and Morocco.

The nature of the Egyptian market and the classes of foreign goods described enter most largely into consumption. Other subjects include international commercial relations, transportation and shipping facilities, credits and trade methods, and general means of information.

INTERNATIONAL TRADE.

The international trade status of Egypt is not so anomalous as is her political position. No preferential tariff exists and the treaties of commerce—which have the favored-nation clause—do not affect the customs schedules. The majority of articles from all countries pay a uniform duty of 8 per cent ad valorem. The political predominance of England in Egypt secures her no commercial advantages, and the assent of the other nations of Europe, which is essential to this control, would not be given if it were to result unfavorably to their trade. The freedom from international influence of the Sudan, which is a British dependency under a very tenuous Egyptian sovereignty, does not tend to exclusive advantages there and it stands substantially as Egypt proper does. The foreign commerce of Egypt, therefore, is on a fair footing for all nations. The United States maintains consular jurisdiction of its citizens and is represented in the Mixed Tribunal, which is the real international governing court, so that its position is like that of the European nations, and in commerce its citizens are just as free to seek for Egyptian customers as are Europeans, provided they have sufficient enterprise to improve their opportunities.

ALEXANDRIA'S COMMERCIAL IMPORTANCE.

The bulk of the foreign commerce, more than 85 per cent, flows through Alexandria, a semi-European city of 330,000 inhabitants, the most cosmopolitan of all the Mediterranean ports. Damietta and El Kosseir, at the mouths of the Nile, have customs-houses, and the former

handles merchandise to the amount of \$1,000,000 annually. Port Said and Suez, at the entrances of the canal, have the transit traffic as well as regular imports and exports, but in 1905 the imports and exports through Alexandria reached \$193,244,105 out of a total of \$215,176,000 for all ports. This included the imports in bond for Cairo, where a custom-house is maintained and to which goods can be shipped direct. The tonnage of the ships entering Alexandria in 1905 was 3,296,000 tons. All the leading importing and commercial houses as well as the banks have establishments in both Cairo and Alexandria. A private corporation operates a bonded warehouse at all the ports.

REPRESENTATIVES OF ALL NATIONS.

Numerous chambers of commerce and boards of trade are maintained by the different nationalities, with a view to fostering closer commercial relations with their respective countries. They include British, French, Austrian, Greek, Russian, and Italian associations. Most of them publish monthly bulletins. The Alexandria General Produce Association is not limited to any nationality. It has two sections, one relating to cotton and the other to cereals. The bourse, or stock exchange, of Alexandria is like similar bodies elsewhere, and its activity or dullness reflects the conditions of Egyptian stocks and to some degree the financial mood of the country.

An International Chamber of Commerce exists with headquarters in Cairo. It issues a monthly bulletin and other publications in the French language, which give the most recent fiscal, commercial, and financial intelligence. It is controlled by an executive committee, and its membership covers the leading business houses, banks, and importers. Its correspondents include the chambers of commerce in New York, Baltimore, Pittsburg, and Dallas.

For authentic and official information in regard to Egypt's political, economic, and fiscal affairs the invaluable basis is of course the annual report of the head of the British administration, Lord Cromer, which is usually transmitted to Parliament in April. These reports, in their review of the economic situation of the country and the Government's plans for public improvements, are an excellent indication of the demand which may be expected for foreign goods.

TRANSPORTATION FACILITIES.

Means of communication, transportation facilities, enter so largely into the willingness of manufacturers to seek new markets that it may be repeated that as to trade routes Egypt is quite accessible to the Atlantic coast ports of the United States. From New York to Alexandria via Gibraltar is approximately 5,000 miles, but much of the freight traverses a longer course because it is forwarded to Antwerp, Bremen, Hull, or Liverpool, and transshipped at those points

instead of being consigned to transshipment at Marseille, Genoa, or Naples. Of American goods whose destination is not known by the shippers, though they reach Egypt and appear in the customs returns as imports from some European country, Liverpool probably receives the largest consignments. Some heavy machinery is sent to Hull, but this is on direct orders from Alexandria, and the imports are credited to the United States.

DIRECT LINE TO NEW YORK.

The attempt to maintain a direct line between New York and the Levant, with Alexandria as a port of call, was made by one of the German companies three years ago, but it was given up because sufficient cargoes could not be secured. I am informed that the prospect for improvement in this direction, while not immediate, is more encouraging. An Italian ship which made the experiment of direct transit last spring gave satisfaction both to the exporters in the United States and to the importers in Alexandria. The nature of the cargo brought direct from New York to Alexandria by this Italian ship, the *Citta di Messina*, can be judged by the manifest, which was as follows: 1 box leather belting, 14 cases leather, 1 case furniture, 1 package camera, 88 packages merchandise, 43 boxes typewriters, 1 box typewriter parts, 1 box typewriter supplies, 11 cases castings, 200 cases whisky, 45 cases pumps, 25 boxes bottled beer, 14 packages wind-mill parts, 2 boxes wagon springs, 24 wagon springs, 105,431 bushels white corn, 21 packages merchandise, 1 box hair tonic, 17 packages merchandise.

COTTON SHIPMENTS.

The drawback to continuing the experiment was that there were so few goods to be shipped from the United States to Egypt. The vessel companies want to see larger cargoes in sight, and this only will be possible when American manufacturers wake up to the opportunities of the Egyptian market. But in view of the cotton shipped to the United States, all of which goes by way of Liverpool under through bills of lading, the prospect of direct steamship communication with a cargo in each direction does not seem remote. In shipping circles here I have heard the opinion expressed that a direct line might be maintained eight months out of twelve, based on the cotton shipments, which begin in September. The cotton shippers would welcome the possibility of return cargoes from the United States which would encourage a direct line. They are now in the grip of an English vessel combination or trust, the members of which renew the agreement annually. Under this combination they are forced to make all their shipments via Liverpool.

In the meantime lack of transportation facilities is no bar to getting American goods into Egypt, as intending shippers can learn on appli-

cation for rates to the New York agents of the various companies. They have the benefit of the German, the Italian, and the English and American lines. For light freight unusually good time in some cases has been made, the Italian lines laying down goods in Alexandria within fifteen days after they were placed on board in New York. The enormous increase in the passenger business of the Mediterranean lines is adding to the facilities for cargo transportation. All of them during the winter season, from December to February, dispatch some of their biggest steamers direct from New York to Alexandria, and since these vessels have a considerable cargo capacity the means of landing freight in Egypt without breaking bulk are already available for a limited period of the year.

INDUCEMENT TO AMERICAN MANUFACTURERS.

That the transportation facilities as they now exist should be an inducement to American manufacturers to enter the Egyptian market will appear from a comparison. Alexandria, on the direct route, is 1,000 miles nearer to New York than is Buenos Aires, the entrepôt of the Argentine Republic, where the greatest expansion of United States trade with South America has taken place. The lack of direct communication with the east coast of South America, the irregular and intermittent sailing of the few lines which do maintain a direct service, and the extent to which the cargoes have to be forwarded to European ports and transshipped, thus adding between 5,000 and 6,000 miles to the ocean carriage, have been discussed too frequently to require repetition. The point is that in spite of these drawbacks manufacturers in the United States, particularly the makers of agricultural machinery, have found a very profitable market in Argentina, and have followed it up. Egypt is a large buyer of the same class of articles, and is not only nearer in actual distance but infinitely more accessible as measured by steamship lines. A further illustration might be found in Australia, which is also a heavy buyer of American farm implements.

QUESTION OF CREDITS.

Assuming that the American exporter is ready to establish himself in the Egyptian market, information relating to the packing, invoices, manifests, bills of lading, and shipping forms is easily obtainable through the commission agents or the importing houses of Alexandria and Cairo, and I do not propose to go into those matters here. But the question of credits is an essential one and can not be so easily dismissed. It may be said at the outset that the Egyptian market is not worth experimenting with by manufacturers or exporters in the United States unless they are willing to make some concessions to the

terms extended by the European houses. Cash with order may be obtained for specialties which can not be bought elsewhere or with an occasional shipment that is not a specialty, but it can not be insisted on as a regular thing. I have found a prevalent opinion that Egyptian credits are too long, and English houses complain of their German competitors in further extending them. This has gone on until a reaction has taken place, and now there is a tendency to shorten them. But at the best ninety to one hundred and twenty days' time will be required, and by conforming to this practice a trade may be secured which otherwise will be out of reach.

The banks of Cairo and Alexandria are in very close touch with the financial institutions of London and Paris. Where New York banks have no direct communication with Egypt they can secure prompt and reliable information for their customers through their correspondents in France and England. The essential point for the American manufacturer or forwarding agent is to inform himself fully in advance concerning the financial standing of the buyer, and not to affront rich and powerful importing houses by soliciting orders and then making indiscreet inquiries regarding credit or insisting on conditions that are sure to be resented. The cable offers prompt means of communication with the banks in an emergency. Letters from New York ordinarily are received in fourteen to fifteen days, so that a month should be allowed for the receipt and answering of correspondence. Quicker transit may be had by timing letters to reach London for the fast Egyptian mail via Brindisi, which leaves every Friday afternoon.

TIME FAVORABLE FOR AMERICAN ENTERPRISE.

From every point of view the time is a favorable one for a systematic and sustained effort to gain a permanent foothold for American products in Egypt. I shall not dwell here on the mistakes of the past nor repeat the cynical comments of the dealers and agents who in trying to build up a business found their labors thwarted by the indifference of the manufacturers to their recommendations. They still believe there is a good margin of profit under which they could handle many articles from the United States on a better basis than those of European origin. But the methods are conservative and the "in to-day, out to-morrow" type of commercial traveler will receive little encouragement. The nature of the demand and the trade methods in vogue need to be studied more thoroughly than is possible by that class.

The annual winter pilgrimage, which brings so many Americans to Egypt, includes active business men, and these would do well to stay long enough in Alexandria to familiarize themselves with the shipping facilities and other conditions of import trade. They would then be

in a better position to investigate the market as it may be studied in Cairo. They would be sure to realize the loss of American prestige and of actual business that has resulted from soliciting orders and, after they were received, delaying to fill them on account of the active home demand. Spasmodic enterprise of this sort has done much harm.

FEASIBILITY OF AN AMERICAN EXPOSITION.

The feasibility of a permanent American exposition in Egypt has been discussed, and I find a very general opinion that it is practicable and would serve excellently the purpose of making American goods known.

Machinery, and in particular agricultural machinery, should be the principal feature of such an exposition, which should include bicycles, automobiles, typewriters, timber, office and household furniture, stationery, paints and varnishes, light railway plants, sanitary appliances, windmills, wagons, carts and carriages, carpenters' and joiners' tools, belting, clocks and watches, sewing machines, boots and shoes, cutlery, crockery, glassware, silverware, lamps, trunks, saddlery, guns, revolvers, rifles, refrigerators, stoves and cooking ranges, safes, etc. With reference to machinery it should always be kept in mind that the expenditure of fuel is the important element in Egypt.

An estimate furnished me fixed \$7,500 annually as the sum which would be required to maintain such an exhibition. This amount would include rent in one of the central and most frequented parts of Alexandria, salaries of clerks, taxes, advertising, and all incidental expenses. Many firms by contributing pro rata would insure the success of the plan, and the quota would be reduced as new members were added. Manufacturers taking part should of course protect their products by registering their trade-marks under the Egyptian law, which is a simple matter. I suggest that those who feel interested in this subject place themselves in communication with Mr. F. L. Romeo, of the American consular agency, Alexandria. Those who intend visiting Egypt can discuss it in person.

ADVANTAGEOUS POSITION OF UNITED STATES.

The present time is an exceptionally good one for a propaganda of American goods. The intricate international issues and the delicate diplomatic questions involved in the political situation in Egypt are beyond the province of this report. The fact is patent that a reaction has occurred against European influence, and it prejudices the Egyptian consumer to a certain degree against European goods. When this matter was first brought to my attention with the suggestion that the United States was the only great Christian Power not under the distrust of the natives of Egypt, and was therefore in an advantageous

position to sell goods, it seemed so farfetched that I gave little attention to it. But the repetition of the suggestion in different quarters caused me to make unobtrusive inquiries and to reach the conclusion that the existing situation does offer an entirely legitimate opportunity for a propaganda directed to making American goods better known in Egypt and to create a demand for them.

INFLUENCE OF THE ARABIC PRESS.

While the mass of the Egyptian population is very ignorant, nevertheless the Arabic press is a power just as is the press in the United States or England, perhaps even more so, because its utterances when conveyed through those who can read, carry to the illiterate something akin to infallibility. The educated Arabs know that the United States never can be involved in the mixed and sometimes selfish motives which dictate the relation of the European nations to Egypt. They know that its attitude is disinterested, and in this disinterestedness they see an advantage for their own country. They have spread this feeling among their countrymen, and thus it has come about that there exists a receptive sentiment which assures a favorable disposition to anything that is American. The great body of native consumers must be reached through the medium of their own language, and when the first step has been taken by making them well disposed to articles produced and manufactured in America, the sale of such goods should be pressed on them through agencies familiar with the native needs and the native peculiarities. A machinery importing firm, recognizing this fact, distributes a paper published in Arabic, which is devoted chiefly to explaining the utility of American farm tools for Egyptian farmers.

I do not urge this receptiveness of the Egyptians to American influences at the present time as a controlling force in expanding the trade of the United States, but as a circumstance of which advantage should be taken.

CONSIDERATIONS THAT SHOULD GOVERN.

The governing considerations of Egyptian commerce which should excite the interest of the United States rest on very broad grounds. The growth of the foreign trade has been remarkable and the end is not in sight. With due regard for natural reactions and the bursting of speculative bubbles, the economic condition of the country is sound because its productive capacity is being systematically and permanently increased. The initiative of the State in irrigation and similar works which increase the area of cultivation and add to the productiveness of that already under cultivation encourages the enterprise of the individual. A progressive Arab of Cairo is sinking wells and installing irrigation pumps at the foot of the pyramid of Cheops, and the Sphinx, after gazing thousands of years on sand wastes, soon will

be looking out on green fields. That is one of many demonstrations of the change from the old to the new Egypt.

Cotton will continue to be the staple crop, and its increase, which can be discerned with certainty, will add to the ability of the people to buy abroad. Within less than five years the total foreign commerce, which in 1895 was a little more than \$100,000,000, will mount to \$250,000,000, one-half of which will be imported goods. How much of this the United States shall contribute, in place of the present fractional percentage, is for the manufacturers and exporters themselves to say. It is for them to realize that a new Egypt—a commercial Egypt—exists, which lies at the gateway of a new commercial Africa.

SIX MONTHS' RECORD.

FIRST HALF THIS YEAR SHOWS INCREASED FOREIGN TRADE.

Consul W. H. Bradley, of Manchester, reports that the publication of the Egyptian customs returns for the six months from January 1 to June 30, 1906, show that the foreign trade was the largest yet recorded, amounting to £21,668,239 (\$107,041,100), of this £10,513,579 (\$51,937,080) were imports and £11,154,660 (\$55,104,020) exports.

The exports of cotton were less this year than last, but the higher prices made the value of the shipments show an increase of £1,923,420 (\$9,526,395).

Germany's share of the exports rose from 9 to 10.8 per cent, and that of France from 8 to 8.9 per cent. The United States took nearly 1 per cent less, falling from 6.2 to 5.5 per cent. The Germans in their trade with Egypt are said to be helped by two factors; better through rates for shipping and their willingness to accept longer credits, which, while it may gain a market, and a knowledge of German goods, is said to be of doubtful expediency, as German creditors have figured to an increased number in Egyptian failures according to the Chamber of Commerce Journal. On the whole, this journal thinks the importance of German competition there is exaggerated.

EGYPTIANS ADOPTING GLASSWARE.

The rapid increase in the imports into Egypt of glassware is reported by a French commercial bulletin from Alexandria.

The 1905 imports amounted to \$700,000, as compared with \$200,000 in 1892. This increase is said to be due to the influx of Europeans into the country, and also to the general improvement of conditions of living of the natives, who were formerly contented with earthenware table utensils but are now larger purchasers of glassware. The extensive adoption of oil for lighting purposes has also given rise to a demand for glass lamps, which come from Austria and Germany. Lemonade bottles with marble stoppers are imported largely from Great Britain and delivered at about \$5 a gross. Glass bracelets are largely worn by the native women.

SOUTH AFRICAN POWER QUESTION.**OVERCAPITALIZATION FEARED IN DEVELOPMENT OF VICTORIA FALLS.**

The development of the Victoria Falls power scheme in South Africa is the subject of an extended Johannesburg dispatch in the London Financial Times.

An authoritative Transvaal engineer indicates the amount of power which the African Concession Syndicate would be able to draw from the Falls as 275,000 horsepower, and it is clear that this enormous amount of power would be more than sufficient to cover all the requirements of the whole of the Transvaal and Rhodesia. It is stated in one case the capital of the company to be formed will be \$15,000,000, but in another statement it would seem that in addition to this debentures will also have to be issued to the extent of probably \$11,000,000, the presumption being that the promoters will also claim \$5,000,000 for the concession. It appears that for depreciation purposes about \$1,260,000 will be necessary, and as much more for interest, cost, and administration. The engineer interviewed says that it is hard to see, even for an optimist, where the requirements for electrical energy could be found which would justify such a huge undertaking.

It would appear that the Chartered Company undertakes to find the capital for shares and the Allgemeine Electricitaets Gesellschaft the capital for debentures. It is denied that the scheme is to be controlled by German financiers, but it would appear that the order for the electric installation for the principal plant has already practically been placed with a German firm, states the engineer.

The high cost of development, it is thought by another engineer, can hardly stand up against the proportionate cost of steam plants on the Rand, and the correspondent adds that the scheme would not be feasible unless current could be supplied at guaranteed regularity at under 1 cent per unit.

AFRICAN VENTURES.**NEW TRADE ROUTE TO ABYSSINIA.**

Attention is drawn by the French Journal des Débats to the English efforts to open up the river Juba, which separates British East Africa from Italian Somaliland. A flotilla of two steamboats and six lighters is reported to have crossed the bar at the mouth of the river toward the end of May, and, after taking on board a miscellaneous cargo at Gobwin, to have ascended the stream to a distance of 300 miles, the journey into Abyssinia being completed by caravan. The Journal des Débats anticipates that the route thus followed will involve competition with the Harar-Jibuti Railway.

FRENCH EXPEDITION TO LAKE CHAD.

A French journal makes the interesting announcement that Captain Lenfant, the French explorer, is about to leave on another expedition to West Africa in order to discover, if possible, a navigable waterway

connecting Lake Chad with the coast of the Atlantic. In his former expedition of 1903-4 Captain Lenfant ascertained that a through waterway existed along the Niger, the Benue, the Mayo-Kebbi, the Logone, and the Shari, but he was unable to follow it from beginning to end by boat, as the Mayo-Kebbi was found to be obstructed by rapids, round which it was necessary to travel by land. His discovery, however, enabled the French Government to abandon the difficult and costly Congo-Ubangi-Fort de Possel route for conveying supplies to the troops on the lower Shari in favor of a route from Forcados, at the mouth of the Niger, along that river, the Benue, and the Mayo-Kebbi, to Lere, from which point beasts of burden are employed as far as Lake Tuburi, where the journey by water is resumed. It will be interesting to observe whether Captain Lenfant's new attempt to discover a practicable through waterway will be rewarded with success.

TAX ON COMMERCIAL TRAVELERS.

EXTRAORDINARY EXACTIONS IN LOURENÇO MARQUEZ.

Consul W. S. Hollis, of Lourenço Marquez, reports a new tax on commercial travelers in his district. He writes:

Owing to representations that were made by the local chamber of commerce to the General Government, a new tax has been placed upon all commercial travelers visiting the district of Lourenço Marquez. Any person visiting this district for the purpose of taking orders for any kind of merchandise, even if the said person remains for only one day in the district and brings no samples, or rents any office or desk room, is considered to be a commercial traveler, and such commercial traveler must take out a license for not less than three months, and for which the following fees (reduced to United States currency) are charged:

Municipal tax, \$11.25; industrial tax, \$45; revenue stamps, \$2.25; emolument to stamp clerk, \$1; total, \$59.50. Any commercial traveler visiting this district and failing to provide himself with the necessary license will render himself liable to a very heavy fine.

NORTH AMERICA.

MEXICO.

DEVELOPMENT OF THE REPUBLIC.

AGRICULTURAL AND COMMERCIAL CONDITIONS IN COAHUILA.

Consul Victor L. Duhaime, of Saltillo, reports on the agricultural conditions and the imports and exports of his district for the last six months of 1905. He writes:

In this consular district many evidences of progress and enterprise are manifest. During the last six months of 1905 we have seen here the innovation of the steam plow, several of which have been imported to be used in this vicinity. Modern machinery for several new rolling flour mills, railroad engines, aerial gravity trams, and freight cars are the imported articles most worthy of note. The importation of American vehicles, furniture, shoes, and ready-made clothing are also steadily increasing.

Exports.—The total exports from this district during the six months ended December 31, 1905, were valued at \$1,303,123 United States currency, as against \$1,033,782 for the same period of the preceding year, an increase of \$269,341.

Calamine to the value of \$8,500, and crude rubber extracted from the guayule to the value of \$1,235 were shipped. Neither of these commodities have ever been exported before from this district. Although the extraction of rubber from the guayule plant is yet in its infancy, and sample shipments only have been made to the United States, the exportation of that product to German ports is already considerable.

A factory was recently constructed at the northern part of this State (Coahuila) for the manufacture of goods out of the ixtle fiber which absorbs a large portion of this product. The fiber export of this district, however, still shows a slight increase.

The export of turpentine shows an increase of \$7,189.

Agricultural products.—The introduction of steam farming machinery will greatly increase those products. Hereafter this State will be able to furnish its own full supply of wheat and corn. Owing to the short crop of the past season wheat and corn will necessarily have to be imported to supply the local demand.

Guayule.—This rubber-producing shrub has attracted much attention here. Factories for the extraction of the gum are in operation and many are being constructed. The demand for the plant has grown so active that most of the land upon which the shrub grows close to the railroads has been either bought or in some way is being controlled. The prices offered, owing to competition, have advanced and in consequence buyers now must seek the more remote regions where it is found, thereby increasing the cost of transportation to the mills.

Goats.—Goats are rapidly becoming one of the most important branches of live stock now raised in the northern part of the Republic. Requiring but little care they are especially adapted to the rocky grazing lands surrounding this plateau. Many persons here are engaged in the business of buying goats and feeding them for two or three months, when they are marketed at a large profit.

Calamine.—This district, a rich mineral region containing large copper, silver, and lead mines, has recently been the scene of great activity in developing the valuable deposits of zinc discovered near here. Owing to the prevailing high price and active demand for calamine, numerous of these mines that formerly could not be profitably worked are now being reopened and new ones extensively developed. Great alertness is now being displayed by the representatives of American zinc smelters in securing the ore, in getting control of mines, and even buying them outright.

ADVANCES IN EDUCATION SECURING PROGRESS AND PROSPERITY.

Saltillo, situated about 235 miles south of the American border, is noted for its delightful, uniform climate, for its excellent fruits and vegetables, mountain spring supply of water, and a modern water and sewerage system. Its beautiful parks are the attraction of visitors and travelers. Being a railroad center, the large agricultural, mining, and manufacturing interests, where a considerable amount of American capital is invested, place the capital city of Coahuila in the front rank as a business center. It has from 30,000 to 35,000 people, a healthy climate, is well and ably governed, and is one of the most peaceful cities of its size on this continent.

President Diaz has done much to secure the advancement in the educational facilities and the wonderful progress apparent in all branches of industry. He uttered words of wisdom when he told the Machinists' Union, when they recently called upon him in reference to the settlement of their grievances, that the Government respected the right of men to refuse to work or to accept wages which they thought too low; that these rights would be always respected, but that they must not forget the protection of the Government could only be thrown around those who maintained a peaceful attitude and refrained from disturbing public order; that to assure the continuance of progress and the development of the national resources it was quite indispensable that all capital, whether native or foreign, invested in undertakings profitable to the country, should be guaranteed and protected in its just rights; that to hamper the operations of companies and to allow unjust demands to be made upon them would bring harm to the whole country and likewise to the workingmen.

The President reminded the workingmen that the Government, while respecting their just rights, would apply severe measures in case it became necessary to maintain the public peace. Thus the machinists, and through them the workingmen of Mexico, were plainly convinced of the President's impartial feelings, of his sense of and determination to secure justice, and peacefully resumed work.

Mexico's proximity to the United States, the mutual interest of citizens of both countries in its opportunities, and in the numerous enterprises render it necessary that capital be safe and that the laws be obeyed. The exports, imports, and railway travel are constantly

increasing—so much so that the Mexico of to-day promises to be one of the most enlightened and advanced countries in the world.

OPPORTUNITIES PRESENTED.

DEMAND FOR HOUSEHOLD AND OTHER MANUFACTURED ARTICLES.

Consul A. J. Lespinasse, of Tuxpam, in his annual report furnishes valuable information regarding business opportunities in that section of Mexico, from which the following is taken:

Frequent requests have been made from merchants and settlers to furnish them the address of manufacturers of cooking stoves and utensils, as there appears to be a disposition to gradually discard the primitive and unsatisfactory clay braziers constructed on an elevated platform of the same material. The braziers are shaped in a semi-circular form, about 4 inches high and 6 to 8 inches apart. The wood is ignited and allowed to consume itself gradually, creating much smoke, and smutting all the cooking utensils which are, as a rule, made of burnt clay. Vapor stoves are being cast aside, owing to the impossibility of obtaining a good grade of gasoline or kerosene, which clogs the mechanism of the vapor process, rendering the stoves useless in a very short time. A cheap grade of wood cooking stoves would meet with favor, and there would be a fair demand among the wealthier class for good, medium-grade stoves, simple in construction and ornamental in appearance. A four-hole top, medium-size oven, with sliding shelf inside, with and without reservoir, height 25 to 30 inches, is preferred, and a limited number of heaters might be sold.

Tinware.—The demand for all kinds of tinware has been great, and no doubt the sales could be greatly augmented through persistent advertising, provided the catalogues were printed in Spanish and supplemented by careful canvassing.

Wooden ware.—But an exceedingly small proportion of the immense variety of wooden-ware articles manufactured in the United States have been introduced in Tuxpam. Most of the articles in use are extremely crude and primitive, and would certainly be replaced by others of modern make if the opportunity presented itself.

Enameled and glass ware.—German enameled and glass ware are almost exclusively employed in Tuxpam, but as a rule it is of inferior quality. A good medium grade would meet with much favor and should comprise such articles as cooking utensils, plates, pitchers, jars, basins, spittoons, etc. The glassware in general use is also of German importation, showy in appearance, but exceedingly flimsy and crude workmanship. The principal articles are tumblers, goblets, casters, tankards, bowls, and a limited number of finer articles which are generally sold on special occasions. In the larger cities, where there is greater wealth, there is naturally a demand for choice and finer grades in all lines of glassware.

Confectionery.—Limited quantities of low-priced confections and candies are imported from the United States, and find ready sale at profitable prices. The demand could be greatly increased and extended to numerous other near-by points if manufacturers would put up the different grades in such a manner that would not deteriorate rapidly after their arrival. The only grades which can be shipped satisfacto-

rily are stick candy, gum drops, fruit tablets, candied nuts, etc., which are put up in sealed cans, but the heat reduces them to a pasty condition, and if not attended to immediately on their arrival they unite into a solid mass, which makes them unsalable.

English goods are packed differently from those which are received from the United States. Layers of candies are alternately placed between sheets of oiled paper, and the sides are also lined with oiled paper. The packages are hermetically sealed instead of having a screw cap, which no doubt contributes to preserve the contents.

Musical instruments.—The absence of American pianos is noticeable, those in general use being of German or French production. The German manufacturer aims to produce an article which superficially appears attractive, and while as a whole they are inferior in construction and tone, they, however, appeal to the trade on account of their moderate cost and terms on which they can be bought. The pianos are packed in the usual wooden case, with inner soldered zinc lining, rendering them absolutely proof against contact with salt water or rain if left standing on wharf or station after their arrival in Mexico.

Organs have not been sold in this section of Mexico, but if properly introduced and their merits brought to the notice of the general public and churches in the small interior towns there would undoubtedly be a good demand for them.

NORTHWEST REGION.

TRADE CONDITIONS IN SONORA—OPPORTUNITIES FOR AMERICANS.

Albert W. Brickwood, jr., vice-consul at Nogales, reviews the business of that district for the year ended June 30, 1906, in which the American commercial predominance is described and opportunities pointed out which deserve consideration from our exporters and manufacturers. Mr. Brickwood writes:

The steel rails for the new west coast trunk line of Mexico, from Guaymas to Guadalajara, which will be about 1,500 miles in length, come from Spain and Scotland. Since October, 1905, about 450 carloads of steel rails from Spain and about 60 carloads of hard-wood ties from Japan have passed through Nogales to be used in the construction of the new road. At present hard-wood ties from Japan are mostly going by water to Mazatlan. Oregon supplies the pine ties and lumber used on the new road, about 75 carloads having passed through Nogales since October. The spikes and bolts used on the new road are supplied by American firms.

Silks are chiefly supplied by Japan, France, and Germany.

Dress goods for ladies' dresses largely come from France, Germany, and Great Britain. •

Perfumes are supplied by France, and wines and liquors by France, Italy, and Germany.

VALUE OF IMPORTS.

Considerable whisky is furnished by the United States. The following is a résumé of the importation of merchandise through Noga-

les for the fiscal year ended June 30, 1906, values being stated in American currency:

Commodities.	Values.	Countries of origin.	Values.
Animal products	\$138, 051	United States.....	\$2, 671, 260
Vegetable products.....	363, 818	England.....	102, 001
Mineral products.....	1, 579, 581	France.....	18, 018
Textiles	163, 552	Germany.....	65, 106
Chemical products.....	82, 601	Belgium.....	2, 211
Spirituous drinks.....	18, 642	Japan.....	1, 236
Paper and its applications.....	30, 456	Austria.....	949
Machines and apparatus.....	438, 696	Cuba.....	62
Vehicles.....	52, 598	Switzerland.....	1, 060
Arms and explosives.....	55, 546	Italy.....	791
Miscellaneous.....	115, 577	Spain.....	176, 424
Total	3, 039, 118	Total	3, 039, 118

Direct railroad communication is being rapidly extended; also connection with ocean steamships at the seaport of Guaymas, Sonora, Mexico.

SUPPLIES FROM THE UNITED STATES.

The principal imports into Sonora from foreign countries, which are mostly supplied by the United States, are given in the following list:

Mining machinery.	Hardware.
Other machinery.	Tinware.
Agricultural implements.	Crockery, glassware, bottles.
Furniture.	Saddlery goods.
Wagons, carriages, buggies, etc.	Arms, ammunition.
Automobiles, bicycles.	Musical instruments.
Baby buggies.	Cutlery.
Ready-made clothing, haberdashery.	Phonographs.
Men's hats.	Jewelry, watches, clocks.
Millinery.	Canned meats, preserved, etc.
Shoes.	Live stock.
Nails.	Paper for printing newspapers.
Wire fencing.	Stationery.

There are over 30 American mercantile and industrial firms who are importing. In this district count has been made of 129 mining companies, and there are about 20 more that should be added. All of these firms import more or less from the United States. A large percentage of them also export their ores. There are no American exporters except the mining companies.

There are not many foreign importing firms in the district. There are 4 French mercantile firms, 3 German, 2 Spanish, 1 English, 2 Greek, 2 Italian, and 3 Syrian. There are 1 French, 1 Italian, and 2 English companies engaged in mining.

There are at least 40 Chinese merchants in the district who import. It is difficult to arrive at the exact number.

There is a chamber of commerce called "Cámara de Comercio," located at Hermosillo, the capital city of Sonora.

There are between 1,500 and 2,000 Americans. They are engaged in mining, engineering, or railroad pursuits or trade.

The American enterprises comprise about 150 mining companies, 2 banks, 3 life-insurance companies, 40 fire insurance companies which have business written in this district, 20 mercantile firms, 10 industrial

concerns, 3 railroads, 2 water companies, 2 electric-light and power companies, and 1 ice plant.

Of the foreign mercantile firms, 4 are French, 3 German, 2 Spanish, 1 English, 2 Greek, 2 Italian, 3 Syrian, and 40 Chinese. There are 1 French mining company, 1 Italian, and 2 English engaged in mining. There are 2 British life insurance companies.

OPPORTUNITIES FOR TRADE ENTERPRISE.

There are 2 American banking firms, unincorporated, in the district, a large incorporated Mexican banking institution (Banco de Sonora), with branch in Nogales, and also a branch of Banco Minero of Mexico. In Magdalena an American mercantile house does a private banking business. The establishment of American banking institutions conducted on conservative principles, giving to American and other depositors generous treatment in the matter of loans required, would promote American interests.

The preference seems to be for goods of American manufacture. Automobiles, vehicles of all kinds, agricultural implements, mining machinery, hardware, saddlery goods, iron beds, clothing and haberdashery, pianos and musical instruments, and phonographic machines find a ready market.

The time is ripe for the establishment of a customs smelter of large magnitude for this northwestern section of Mexico, embracing in its limits mineral districts notable for rich deposits of gold, copper, silver, and lead.

Of opportune industries might be mentioned a harness and saddle factory, paper mill, tannery, sugar refinery, shoe factory, creameries for the manufacture of butter and cheese, chair factory, factory for iron beds, wagon, carriage, and buggy factory.

Quite a profitable income might be derived from the introduction of blooded cattle and pedigreed horses.

There is no seaport in this district. The railroad facilities are all that could be desired.

SUGGESTIONS TO EXPORTERS.

American exporters would subserve their best interests and aid materially in the onward progress of American trade by sending into Mexico experienced representatives, who speak Spanish and understand the Mexican characteristics, customs, and methods, to call upon the trade with samples. Such men should be tactful and conservative. All correspondence and literature sent should be in Spanish. American exporting firms would do well to bear this in mind.

A point for the American exporter to remember is that the Mexican business houses, even those of the highest rating, expect and receive from European exporters long credit—from three to six months, and frequently longer time.

There is reason to believe that this northwestern section of Mexico offers favorable opportunities to American exporters, whatever their business, and a feasible method of trade extension perhaps would be the establishment of exhibition rooms in a central locality for the display of American wares.

LOWER CALIFORNIA.

ENSENADA'S IMPORTS CONTROLLED BY AMERICANS.

Consul E. E. Bailey, of Ensenada, reports that the United States has no competition in the trade at that Mexican port. He writes:

Ensenada is in Lower California, and only 65 miles from San Diego, Cal. No European steamship lines call at the port, and there are no factories in the district manufacturing for export. Therefore in provisions, groceries, canned goods, hardware, agricultural and mining machinery, drugs, medicines, and lumber, the United States has a monopoly. The better class of American shoes, retailing at home for \$3 and \$4, sell readily here for \$8 and \$10 Mexican.

Commercial travelers from San Diego, Los Angeles, San Francisco, Chicago, St. Louis, and Boston call regularly, and the ground seems to be well covered.

The only imported articles not coming from the United States are comparatively unimportant shipments of Scotch, Irish, and Canadian whiskies, French wines and cognacs, and Asiatic rice. These come in bond and the landing certificates do not show price; in the custom-house they are credited to the United States. In cotton and woollens the domestic article represents about one-third of what is used, the remaining two-thirds being American. Hats and caps are nearly all from the United States, especially the better class. The following figures show exports and imports for calendar years (all in United States currency): Exports 1904, \$123,057; 1905, \$70,397, and for the first six months of 1906, \$33,718. Imports 1904, \$102,295; 1905, \$143,095, and for the first six months of 1906, \$77,487.

The difference in exports between the years 1904 and 1905 is almost wholly accounted for by lesser shipments of copper ore. In imports the figures show a good increase.

TRANSPORTATION LINES AND LAND HOLDINGS.

The P. C. S. S. Co., of San Francisco, has a monthly steamer from San Francisco to Gulf of California ports, which stops here going and coming. The freight rate to this port is \$14.50 Mexican per ton of 2,000 pounds.

The L. C. D. Co. (English) has a steamer making six trips per month from San Diego to Lower California ports; freight rate to this port is \$8.50 Mexican per ton of 2,000 pounds.

Traveling men are charged a license of \$3 Mexican if with samples, without samples, no license.

Opportunities for investing American capital are not many. The Mexican Land and Colonization Company (English) hold a concession for all Government lands—about 18,000,000 acres—between the twenty-eighth parallel and the United States boundary. Its twenty-year concession, which expired July last, was renewed for ten years. Then there are 4,000,000 acres in private holdings, which can be bought for from \$2 to \$6 Mexican per acre, suitable for stock. The climate, soil, and rainfall are about the same as southern California. There are no railroads in the peninsula. The English land company operates a telegraph and telephone line between San Diego, this place, Alamo, and San Quintin, respectively.

MARKET OPENINGS.

OPPORTUNITY TO SELL SILVER-PLATED WARE—ADVICE TO EXPORTERS.

In reply to an inquiry from parties in this country, Consul W. W. Canada, of Veracruz, furnishes an interesting report on the best way to win markets in Mexico, laying particular stress upon the present opportunity offered to the manufacturers of electroplated silverware. He writes:

Electroplated silverware, in all its varieties, ought to find a ready market in the territory covered by this consular jurisdiction, which is composed of several rich agricultural states, with a population exceeding 2,000,000 people. While good taste and even elegance prevails at many points in the interior, the seaboard towns, or those near the Gulf coast, offer the best field for the sale of these goods. First among these points must be mentioned Veracruz, Alvarado, Coatzacoalcas, Frontera, San Juan Bautista, and San Juan Evangelista; then Orizaba, Jalapa, Cordoba, Tlacotalpam, Cosamaloapam, San Andres Tuxtla, and numerous others of perhaps lesser importance. The demand does not extend to any special line. All branches of manufactures are represented in more or less variety. German manufactures predominate everywhere, but French articles are also on the market. The Mexican tariff does not discriminate in favor of any one nation. The import duty on goods of this class is fixed at 90 cents United States currency for each 2.20 pounds in weight and up to 22 pounds for each article. Passing this weight, an additional amount is charged at the rate of 25 cents United States currency for every 2.20 pounds, the weight including the inner wrapper on the article but not the case in which the goods are packed.

AMERICAN GOODS IN FAVOR.

American-made stock would sell as readily as any other, or would perhaps have preference owing to more artistic patterns, usually superior to the German manufactures, provided the cost is such as will permit competition with other nations. Wholesale dealers in this line are unknown in this vicinity. The largest importing houses do a wholesale and retail business. Department stores have not yet made their appearance, and retailers in silver-plated ware, with the possible exception of one or two watchmakers' shops, are not to be found here. The principal importers are German houses with connections on the other side, and in some instances with branch establishments in other parts of Mexico. The houses have their correspondents in the United States, keep current accounts with banks there, and their agents attend to all the necessary shipping formalities at the point of embarkation. Occasionally business is done without the services of an agent. Purchases are made for cash and on time; in the latter instance interest, at the rate of 5 per cent, is usually allowed for the accommodation.

HOW TO SECURE TRADE.

As to the best means to be adopted to secure this trade I suggest that parties proceed as they would at home. Select a representative, sup-

ply him with sufficient samples to enable the merchant to correctly estimate the goods, and for the rest a well-illustrated catalogue will answer. Furnish the agent with bed-rock prices, so as to avoid the necessity of cabling in case of a close sale. A prospective buyer may be lost by the inability of the salesman to alter prices at the time, and delays are dangerous. The agent should in all respects be fully empowered to act for his house in everything appertaining to his business.

The representative of a firm canvassing this territory ought to be a person thoroughly conversant with all branches of the manufactures he is handling. He must be fully competent to talk intelligently and convincingly on matters appertaining to the trade he represents. He should be a person of quiet and courteous manners, preferably a middle-aged man whose appearance would at once inspire respect and confidence. Patience is an essential qualification. The agent that rushes in upon a prospective customer, intending to cover the town in half a day, and then rushes off for other parts is likely to go empty-handed.

The successful salesman in this country is one that has perfect command of the Spanish language. Another very important requisite for the commercial traveler is a thorough familiarity with the habits and customs of the people. They ought not to be judged by our standards, and all unfavorable criticism should be carefully avoided.

STUDY THE MEXICAN TARIFF.

Before a traveling salesman undertakes to canvass this country let him first familiarize himself with the Mexican tariff. He should thoroughly understand the method of classification under the customs laws, and as the import duties are mainly assessed in accordance with the weight of the merchandise, and there are three methods of determining this, viz, net, legal, and gross weight, it is of the utmost importance to exercise the greatest care possible in the packing of the goods. Net weight here signifies the weight of an article without wrapper or case; legal weight is that of an article including its wrapper, can, paper box, etc., but does not include the outside packing case, and gross weight includes the weight of the article and its outside case, crate, or wrapping. Serious and costly errors may be committed if strict attention is not paid to these distinctions. A good acquisition for the representative is undoubtedly ready knowledge of costs of freights, commissions, insurance rates, transportation routes, etc.

ORDERS TO BE SAME AS SAMPLES.

When taking an order be sure to do so correctly and make no deviation when filling it. Nothing causes so much trouble and annoyance as substituting one article for another. As a rule the buyer knows what he wants; the seller agrees to furnish that, and the merchandise should always agree with the order even in the minutest details. In many instances the buyer can post the salesman in matters appertaining to packing, the most convenient and advantageous transportation routes, and, in fact, in many things well worth the exporter's attention. If the exporter is desirous of retaining his trade he should make every effort to please his customer, even to the extent of sacrificing his interests, once an order has been accepted. In this manner

only, the necessary confidence between buyer and seller can be established on a firm and solid basis and the trade be secured.

Finally, another important feature in connection with the export trade is to know how to declare merchandise on the consular invoice. Difficulties and dissatisfaction have been caused by improper declarations, as a rule resulting in annoying delays or perhaps extra duties and fines. Merchants on the other side of the Atlantic are fully alive to the importance of this matter and rarely make an error in their custom-house documents. Our own manufacturers are very apt to overlook the importance of strict compliance with the foregoing details; hence dissatisfaction on the part of a buyer may result and the trade be lost, only to be secured by others.

RESOURCEFUL STATE.

VERACRUZ HAS NATURAL ADVANTAGES AWAITING DEVELOPMENT.

Consul J. B. Richardson, of Jalapa, in reply to a request for information about that Mexican region, writes that it is rich in resources and full of promise. His report follows:

The State of Veracruz is now of great interest to foreigners and will be for years to come. It includes both temperate and tropical zones and extends from the Gulf coast to a mountain elevation of 10,000 feet. Thus soil and climate are varied. The markets of Jalapa, 4,600 feet high, have in season apples, peaches, pears, quinces, plums, grapes, oranges, lemons, figs, melons, etc., of the temperate zone, and mangos, zapotes, chirimollas, papayas, breadfruit, cocoanuts, nanches, pineapples, coffee, etc., of the Tropics.

The map suggests the ease and profit of railroad extension. The suggested Mexican link in the Pan-American system will doubtless be under construction soon. It will be built a few miles back from the coast along the foothills, tapping fertile and well-populated valleys, extending back into the sierras, opening and settling a most healthful and delightful region. The State lacks many things that are prime necessities elsewhere. There is need of good roads and city improvement crusades. In many sections carriages, two or four wheeled, are unknown. Enterprising automobile builders are eager to supply this territory. It would be much to the point if they would combine and inaugurate a good-roads movement, thus creating a recognizable demand. It is hard to convince the natives that there is any improvement over the saddle for pleasure or the burro or cargadore porter for business. Yet it is a beautiful State, rich in its possessions and possibilities. It needs no booming; it does need capital.

CHIHUAHUA.

TRADE WITH THE UNITED STATES.

Reporting on the business of his district for the calendar year 1905, Consul Thomas D. Edwards, of Ciudad Juarez, states that there was very general improvement, excepting at points on the border where real estate suffered slight depression owing to the abolition of the free zone. He writes:

Mining, agriculture, and stock raising, especially the mining, has been constantly on the increase. The advance made in these three

principal industries is due almost wholly to the healthful financial conditions in the United States. The money invested in mining operations is brought in by Americans, and the better demand and prices for live stock is in sympathy with the markets in the United States. As the agriculture of this district is largely in the hands of the Mormon colonies, that branch is also being augmented by the coming in of Americans and American money. The total value of American goods imported through this port during the calendar year 1905 was \$9,701,450 United States currency, and the exports \$11,994,164. The declared exports at this consulate aggregated \$743,250, and were divided as follows: Gold, silver, copper and lead ores for reduction 57 per cent, young cattle 30 per cent, hides and skins 4 per cent, miscellaneous 9 per cent.

The articles imported from the United States may all be classed as manufactured articles. The value of machinery for mining and manufacturing was \$1,013,322, or more than 10 per cent of the total.

The indications point to a continual increase of this commerce for many years to come. American manufactured goods are in demand, and the volume of trade depends on the ability of the people to buy. The Mexican people need everything, and if they continue to prosper the Republic will furnish a great market for American goods and wares during the next ten years.

COUNTRY'S PROSPERITY.

REVENUES INCREASE IN SPITE OF REDUCED TAXATION, ETC.

The material development of Mexico under President Diaz is strikingly illustrated by the steady growth of her revenues in the last thirteen years.

Starting with the fiscal year 1893, when the total collections were \$37,607,000, and ending with the fiscal year 1905, which the Mexican Investor estimates to have produced \$92,000,000, the record is a remarkable one. The collections of custom-house revenues increased strikingly during the last half of the year 1905. The increase in those collections in July and August, 1905, might have been explained by the efforts to rush the importation of goods on which the import duties were increased by the tariff which came into force at the beginning of September, but instead of a reduction, which might have been feared as the result of the change in tariff rates, the collections increased during the succeeding months, so much so that import duties during the half year ending December 31 yielded nearly \$3,000,000 more than during the corresponding period of the previous year. The numerous changes in the tariff rates seem not to have caused any inconvenience to the import trade.

The suppression and reduction of taxes on mining did not decrease the internal revenue, as the increased yield of other forms of this revenue not only compensated but caused an increase in collections in the half year under review of \$500,000, as compared with the corresponding half year in 1904.

RAILROAD CONCESSIONS.

Agent E. Von Gehren, of Zacatecas, reports railway concessions to Mr. J. C. Palmer, of Zacatecas, Mexico. Four lines are to be

built, opening up some mining property, thus ministering to the successful development of that part of the country. Work, it is believed, is to begin shortly after the end of the rainy season. The lines are looked upon as of great importance to Zacatecas. Large smelters, it is thought, will be built at Chalchihuites or at some equally convenient point. American mining companies are already at work in that part of Mexico, and are successful. One of the contemplated lines, No. 4, will put the rich grain and agricultural districts of the Jarez and Villanueva valleys into more intimate touch with Zacatecas, thus establishing an easy access to the natural granaries of the State by the mining districts.

DYNAMITE'S SUCCESSOR.

Potasimite, the new explosive perfected in Monterey, Mexico, is attracting great attention, states the Mexican Investor. The factory for its manufacture will be completed within the year. Potasimite was used with success upon the construction of a Mexican Central Railroad branch, and is pronounced safer, cheaper, and more powerful than dynamite. Those explosives based upon nitrogen produce a gas that necessitates abandoning closed works, such as a mine or tunnel during the explosion, and the laborers can not return to work for a long time thereafter, depending upon the facility for carrying off the gas. Potasimite is said to produce no obnoxious gas, the only precaution being for the workmen to get out of the way of the flying particles of the blasted rock.

CANADA.

BUSINESS WITH UNITED STATES.

COMMERCIAL RELATIONS GROWING CLOSER AND STRONGER.

Consul H. D. Van Sant, of Kingston, reports concerning this country's commercial connections with Canada. He finds that a spirit of fairness toward the United States is being built up among the Canadian people that is far more powerful than any law placing British goods under preferential tariff. He writes:

There is considerable discussion in this district among commercial men as to the cause of the increase of the trade relations between the United States and Canada, as against the mother country with the Dominion. While the loyalty to the Empire remains strong and unquestionably preponderating, the commercial relations between the border countries continue to increase largely, both in this district and the entire Dominion.

The needs of the two peoples are similar, their business intercourse of necessity more frequent, their taste, costumes, and style almost alike, and their social, religious, and business interests constantly increasing. A few hours at most separate the commercial centers of the two countries. A trip from one to the other incurs no more expense or time than would a trip from one State to another. It takes weeks to get a shipment from England or Germany to Canada as compared with a few days at most to get them across the line.

The retailer in this district will explain that goods bought in the United States are more cheaply, easily, and safely handled, and owing to keen competition are growing better each year in quality and value. In some cases the writer has found that the demand for American-made goods in the line of boots and shoes, drugs and staple groceries, hardware and machinery is so great as to compel dealers who are otherwise inclined to keep them in stock. Machinery, marine engines and tools, farming implements, windmills, boilers and engines, and hardware of almost every description are mostly American manufacture, and the imports from the United States lead. Considerable quantities of hardware imported from England have been in reality of American manufacture. A certain amount of sales made in this way is not credited to the total amount of exports of the United States to Canada. I have the authority of a number of hardware dealers in both western and eastern Ontario for this statement.

The higher social circles are intensely loyal to the Empire, and usually make purchases based upon their sentiments; but as a whole they take less interest in the matter of trade and commerce than the leading business men, wholesalers and retailers. The middle and lower classes usually buy where they can get the lowest-priced goods of good quality, and as a result the business man keeps in touch with the wants of his best customers, at the best profit he can make, and almost invariably on account of easy, safe, quick, and cheap shipments the demand for goods of American make and manufacture increases with the population and wealth of the country.

AMERICAN SENTIMENT AND INFLUENCE.

American commercial sentiment has also largely increased because from 75 to 80 per cent of the Canadians settling in the United States report the advantages of American goods, and their constant improvement in quality and manufacture. Thousands of Americans are passing through Canada each season, and by their generally kindly deportment and generous outlay as tourists help to advertise and cultivate closer commercial interest.

The interchange between the churches, the constant influx of American ideas and life in the theaters, the continuous visits and married relations of thousands of Americans and Canadians each year, results in an increase in advertisements of American goods, which the enterprising American manufacturers augment by sending their best commercial representatives direct to the dealers.

The tariff is an accepted condition which must stand in the present relations of the two countries, and on its present lines seems to be doing more, if the present prosperity on every side is taken as an indication of its effect, to build up the unbounded natural resources and wealth of the two countries than any other economic condition.

RELATIVE STATUS OF UNITED STATES AND GREAT BRITAIN.

Consul Charles Deal, of St. Johns, Province of Quebec, writes as follows regarding the relative trade of the United States and Great Britain with Canada:

When the full facts regarding British and United States trade in Canada during the fiscal year ended June 30 are shown in detail, it

will be developed that despite the trade barriers between the Dominion and the United States the growth of business with the United States compared with Great Britain is very remarkable. It is undoubtedly true, whatever may be done to foster Canadian trade with Great Britain, and however much imperial and patriotic sentiment may desire its increase, that many considerations will to a large extent offset any advantages that tariffs, shipping preferences, or other ingeniously devised schemes may give the mother country as against the United States. There is the fact that a few hours at most separate the trading and manufacturing centers of the two countries. A trip from one country to the other is no more regarded by the citizens of either in the light of a journey to a foreign country than is a trip from Montreal to Quebec so regarded by a Canadian. Cleveland, Buffalo, and Boston are just across the way from Toronto and Montreal. St. Paul and Chicago are nearer Winnipeg than Toronto, and Seattle and San Francisco are closer to Vancouver and Victoria than is Winnipeg. To get goods from Great Britain is a work of months; to get them from across the line that of days only. Goods of United States manufacture suit the Canadian market; those from Great Britain do not always to nearly the same degree, and a little more enterprise and push on part of American manufacturers would increase their trade wonderfully.

TRADE OF GASPE.

Consul A. F. Dickson transmits the following brief report on the general conditions and foreign trade, especially with the United States, of Gaspé, Quebec. He says:

Business throughout the consular district during the past fiscal year has been good. The fisheries compare favorably with 1905. The lumber industry is increasing, and new mills are being built, many of them running night and day in order to fill their orders. The total trade amounted to \$882,689, of which \$94,401 were imports and \$788,288 exports. About 33 per cent of the imports were from the United States, which amounted to \$31,076, and consisted of the following articles: Church bells, \$710; meal, \$1,257; oil, \$468; anthracite coal, \$3,330; manufactures of iron and steel, \$1,868; nets, etc., \$6,336; cotton goods, \$576; scientific instruments, \$693; provisions, \$4,586; settlers' effects, \$1,074, and other articles, \$10,178. The value of the declared exports to the United States was \$180,048.

BRITISH COLUMBIA.

PROSPEROUS MINES—FRATERNAL FEELING.

Consular Agent George A. Ohren, of Rossland, furnishes a report covering the year 1905, from which the following paragraphs are taken:

During the past year general conditions in this consular district have improved to a marked degree, which is almost entirely due to the prosperous condition of the mining industry, although agriculture and lumbering have aided much in the general advancement. The bounty granted on lead mined and treated in Canada by the Dominion government gave the lead-mining industry a helping hand at a time when

it was much needed. However, since the granting of this bounty the price of lead has gradually advanced with the other useful and precious metals to a point where it has completely swamped the sliding scale of the bounty; but now that the industry is strong and healthy it does not need the support of the bounty.

The rise in the prices of copper and silver has largely aided the low-grade copper mines of this district, resulting in the opening of many new mines and prospects and in an increase in the quantity of ore shipped of from 100 to 300 per cent. Owing to many beneficial influences the mining companies hereabouts are now in smooth sailing. The long looked for resumption of the payment of dividends has been realized.

AMERICAN INFLUENCES.

Imports into this country are on the increase, and there is no doubt but what American products are entering this district in increased quantities. The American exporters, however, are meeting with much keener competition now than they did ten years ago. This applies to packing-house products, staple groceries, furniture, machinery, carpets, wagons, guns, etc., so it behooves our exporters, if they desire a portion of the business in this district, to put up first-class goods at reasonable prices.

A friendly feeling exists in this district between the Canadians and the Americans. At a recent celebration of the miners, mine owners, and merchants of Rossland to promote good feeling among the citizens of the camp large quantities of bunting were naturally used to decorate the business houses, streets, and residences. Nearly every third flag among the whole was an American flag. This applies to the official (decoration committee) work as well as to the decorations put up by individuals. At most of the public functions here, while the toast "To our cousins across the line" does not always appear on the list, it is almost invariably proposed by the chairman, in most cases a fair-minded Canadian, and responded to heartily.

VANCOUVER ISLAND.

PROGRESS AND PROSPERITY INDICATED EVERYWHERE.

Consul A. E. Smith, of Victoria, transmits the following report on the output of coal, lumber, and minerals of the island during the past year. He writes:

The principal product of Vancouver Island is coal, of which there were mined during 1905, 993,899 tons. Of this amount 380,332 tons were sold in Canada, 427,698 tons exported to the United States, and the remainder used for local consumption. The amount of coke produced was 15,661 tons, of which 5,410 tons were sold in Canada and 4,300 in the United States, including Alaska, while 5,950 tons were added to stock. In 1904 the mines turned out 1,023,013 tons of coal and 19,371 tons of coke. The total coal sales show an increase of 24,000 tons, or 3 per cent over 1904. The sales to the United States amounted to 53 per cent of the total, most of which was disposed of in the California market, the remainder going to Alaska, where the recent developments in metalliferous mining seem destined to produce a constantly increasing market for this article.

SMELTING OF ORES—LUMBER AND BRICK PRODUCTION.

Of the two smelters the one at Crofton was not in operation during 1905, but "blew in" on January 6, 1906, and is treating ore from the Britannia and other coast mines. The returns from the Tye smelter at Ladysmith was in blast 164 days of 24 hours each, and produced 38,960 tons of smelted ore. The value of the ore smelted, less refining charges, was \$506,600. The copper product of the island in 1905 was 3,437,236 pounds, a decrease of 2,523,357 pounds from 1904.

There are six lumber mills in operation in this district, the capacity of which is 430,000 feet per day. Four others are built and another building, which will be in running order in a few months, including the new shingle mill, said to be the largest in the world. In 1904 the quantity of lumber turned out on the island was 40,249,818 feet; in 1905, 43,564,712 feet.

The Victoria brickyards in 1905 turned out 7,500,000 bricks. The manufactures of draintile amounted to \$90,000 and the product of Portland cement was valued at \$150,000. Large quantities of stone have been cut from Nelson and adjacent islands, the value of which was \$100,000.

NEW BRUNSWICK.

FAVORABLE CONDITIONS AT MONCTON IN MANY LINES OF TRADE.

Consul Gustave Beutelspacher, reporting on the commercial and industrial conditions of Moncton, New Brunswick, says:

Business, notably the building trade, continues to be very active, though, on account of great numbers of young men leaving for the Canadian Northwest, skilled labor is very scarce. Wages are continually on the increase and the cost of living very expensive, as the price of provisions almost doubled during the last few years. Statistics for foreign shipments for the calendar year 1905 show a slight gain in the total over 1904, though they were less than in 1903, when they reached \$590,255. In 1905 the total trade of the district was \$530,357. The plaster shipments at Hillsboro, all for the American market, show a remarkable gain, being 91,000 tons in 1904 and 132,233 tons in 1905. Great Britain took \$281,151 worth of sawn lumber, and the United States took \$46,059 worth, besides crude and calcined gypsum valued at \$136,413 and \$183,147, respectively.

In the last ten years the dairy industry has made rapid strides. In 1896 the output of butter and cheese in New Brunswick amounted to \$76,000 and in 1905 the value was \$344,000. In some counties the factories are run on a cooperative plan and the returns show that the system is a good one. Very little butter and cheese went to Great Britain. The local market and the West Indies took most of the output. The average price for cheese was 12 cents and for butter 21 cents a pound. In 1905 there were 43 cheese factories in operation against 53 in 1904, turning out a product valued at \$143,315 against \$161,262 for the output in 1904. In creamery butter making there was an increase of 10,701 pounds.

The shipments of fish from Moncton and the two agencies, New Castle and Richibucto, to the United States for the last six months of 1905 were valued at \$327,893, against \$160,973 for the same period in 1904. The increase was chiefly in canned lobsters.

SOUTH AMERICA.

BRAZIL.

PUSHING AMERICAN TRADE.

VALUABLE AND SIGNIFICANT CONSULAR SUGGESTIONS.

Consul-General George E. Anderson, of Rio de Janeiro, gives American merchants and manufacturers excellent advice in regard to the best methods by which foreign trade is to be obtained. From a large experience in the East, and now in Brazil, Mr. Anderson is as one speaking with authority. He writes:

In response to the ever-recurring inquiry as to what is necessary to extend American trade abroad it is very easy to lay down general rules, but of course it may be a vastly different matter to follow them successfully and meet the conditions of each particular business. Taking things as a whole, however, in the countries in which I have had experience it has been found that to get business it is necessary to follow the same rules that are followed in the United States. I have been unable to find any satisfactory reason why American manufacturers should expect to secure trade abroad in the face of international competition with less trouble and expense than in the United States. To secure trade anywhere a manufacturer must go after it; and American manufacturers who are going after foreign trade patiently and persistently, not expecting to gain everything in a day, are securing it and are building up a constantly increasing business in parts of the world where American goods have heretofore been little known, if at all.

REQUIREMENTS FOR SUCCESS.

The first requirement of building up business abroad is personal representation. As to the nature of this representation there are several systems to be followed, and perhaps it is unwise to express an opinion as to plans. The ideal representation would be a direct special commercial traveler selling goods from manufacturer to dealer, a man able to speak the language of the country, with a thorough knowledge of the country and its people, as well as knowledge of the trade he represents. Heretofore the expense of securing and maintaining such a representative has kept most American concerns from securing advantages that would otherwise follow.

There has been a general adoption of one of three other plans: First, sending a man into the field who represents from two to a dozen different lines of trade in the territory worked; second, securing local representation through a local firm in each trade center which deals in many lines, mostly commission houses; and third, the plan of manufacturers' agents, whereby a representative is secured in the person of

a man or firm which receives a commission on all goods sold in the territory covered by him on several lines, soliciting business for the firms he represents, and being responsible for credits, collections, and, in short, practically buying goods at his own risk with certain advantages in the business.

REASON FOR DIRECT REPRESENTATION.

These several plans are followed with more or less success in Brazil at the present time. Where a manufacturer has an extensive line of goods for which there is or can be created a demand in Brazil, for instance, that manufacturer ought to have his own man here. Any other plan will simply allow European competitors to secure the business. In general it is safe to say that where it pays a European firm to keep a man in the field it will pay an American manufacturer. Where there is not enough business to maintain a representative of one line it has been found practicable for a representative to have several lines, but not too many. The chief mistakes in such agencies have been in attempting to cover too much territory for too many people, satisfying none, and merely spoiling the field for real work. The plan of securing local firms as agents for American houses should be followed only as a last resort. Of course, everything depends upon the firm and its connections. Most foreign houses at present are British or German, and naturally, while they may represent any American concern, they are more interested in British or German than in American products.

As between local agencies and manufacturers' agents so called, I believe the latter plan is the more successful and more satisfactory in the long run. None of them is as successful as direct representation by a man acquainted with the local language and the trade he represents. The most successful trade abroad by Americans has almost without exception been established by having a direct representative in each great trade center of the country covered, like Rio de Janeiro in Brazil, Buenos Aires in the Argentine, Shanghai and Hongkong in China, Habana in Cuba, and the like, with local agencies generally held by natives of the countries covered in the smaller centers working under the direction and control of the representative in the large center first referred to. This is the plan followed by the great American corporations doing business abroad, and it is the most reasonable, economical, and effective plan.

SUITABLE GOODS MUST BE SUPPLIED.

Manufacturers in the United States in working for the home market find out what is required and then manufacture for it. It is unreasonable for American manufacturers to follow any other plan with respect to foreign trade, and yet it has come to be understood in some lines that all that can be expected from the United States is a surplus of goods which were manufactured originally for American consumption. To sell goods abroad the goods must be suited to the needs of consumers abroad.

They must be suitable in nature, quality, price, and condition; the element of climate, racial traditions, social environment, and industrial growth must be considered. Naturally where goods of a certain

class have been sold in a country for generations it will be the part of common sense to follow the time-honored demands of the country, suiting the goods manufactured to the brands which have been on the market for years, furnishing like goods for less money or better goods for the same money, if it is possible to do so. It may be possible to introduce novelties and establish a demand for an entirely new line of goods, but as a rule it goes without saying that an established line of trade is safer and more satisfactory. Such a line of trade may be more difficult to reach, but when once reached it will be more easily retained.

PACKING AND CREDITS.

The matter of packing is just as important at the present time as it has been in the past, although so much may not be said about it at the present time. American shippers have improved very much in this line in the past two or three years. The matter of seeing that goods reach the consignee in proper condition must not be lost sight of. It is one of the secrets not only of securing but especially of keeping a trade once established.

One of the most important elements in the entire trade situation affecting American manufacturers abroad is the matter of credits. American manufacturers have been in the habit of insisting upon money in New York or some other American city before goods are shipped. European competitors, on the other hand, have been giving long credits. I do not see how American manufacturers can hold to their present credit methods and succeed abroad. They have been handicapped in Brazil as elsewhere by the lack of an American bank and the proper means of establishing credits for foreign firms. There are indications that one of the great American commercial agencies will establish a branch in Rio de Janeiro within a short time, where much of the present difficulty in this line will be obviated. American houses, however, must loosen up some of their credit rules for foreign trade. They must expect to meet foreign competition. Brazilian dealers are accustomed to long credits, and it will be a long time before cash transactions, even at a marked discount, will appeal to them.

PERTINENT FACTS.

It should be realized that Brazilian trade in general is metropolitan and not of the mail order character. Mail trade in some lines may be possible, but it will be exceptional. The territory here which is worth working at all should be worked as home territory.

The language in Brazil is Portuguese and not Spanish. Catalogues in Spanish might as well be in English. The use of English is increasing at a rapid rate, and almost every house of consequence will have an English-speaking man about it. But in hunting business it is not good policy to force a catalogue reader to hunt up an interpreter before investigating on paper the merits of goods offered him. There are almost if not quite as many people in South America who speak Portuguese as there are who speak Spanish.

American trade in Brazil will not come for the mere asking. It will require long and persistent effort, and in some lines it will require a considerable expenditure of capital. But it will come in time, and it will be worth the effort required to secure it.

PLATED WARE OPENING.

OPPORTUNITY FOR AMERICAN MANUFACTURES.

Mr. Anderson also furnishes the following report on the sale and use of silver-plated ware in Brazil:

Apparently there is something of an opening in Brazil for the sale of American plated and hollow ware. The Brazilian people have taken to such goods with increasing readiness, and the present trade would be far larger than it is if it were not for the high tariff on such goods, the customs imposts running about $1\frac{1}{2}$ cents gold per gram, with from 15 to 30 per cent ad valorem, part of which is payable in gold exchange, depending upon the quality and class of goods. Last year there was imported about \$150,000 worth of plated ware, classed as such in the customs returns, more or less coming in under other terms. Of this amount Germany furnished about 50 per cent, France about 25 per cent, Great Britain about 12 per cent, and the United States about 9 per cent. Of the total about one-half was entered at Rio de Janeiro.

There is no reason why American plate should not secure a foothold in Brazil. It is in the same position as regards the trade that the products of any other nation are, and there is a general friendliness toward American goods. American goods have not been pushed here, however, in this as in most other lines, and if there is to be any American trade American manufacturers must expect to undertake the difficulties and labor which go with an introductory campaign. As in other lines, there is little done in Brazil in the way of jobbing in such ware, the goods as a rule being sold by the manufacturer to the dealer. American manufacturers in general must be prepared to extend credit further in the trade of this portion of the world than they do in trade in the United States, both in the matter of time and other terms. Heretofore there has been considerable difficulty on the part of American concerns in establishing a proper basis for credit. In the near future, however, this trouble will probably be obviated by the establishment of a branch of one of the great credit-investigating agencies, preliminary work to that end being now in progress.

AMERICANS SHOULD BE ON THE SPOT.

In this, as in all other lines of trade in South America, or, indeed, anywhere else abroad, there is need of Americans on the spot to introduce American goods. It is possible that goods can be sold at long distance and that the results will be satisfactory, but the prospect is doubtful; and in view of the fact that European nations have the bulk of South American trade at the present time, that they are prepared to maintain their trade with all the means open to a business strongly established, and that American trade will be established here in general only after a hard fight and in the face of the keenest competition, it is only reasonable to expect success in establishing such trade will come only by the use of the best means possible. It is probable that in the plated and hollow ware trade a trip to Brazil by a good salesman able to speak Portuguese, or at least able to adapt himself to Brazilian conditions, and the establishment of local agencies will be all that is necessary or all that the trade will stand. But there is trade in South America to be had, trade upon a permanent basis, covering a large

and increasing population, which is reaching out more and more for foreign goods, representing the most advanced demands of civilized people.

There is some plated ware manufactured in Brazil, but I do not believe it can compete with foreign-made goods properly introduced.

American manufacturers contemplating a campaign in behalf of plated-ware goods or wares generally sold in silversmiths', goldsmiths', and jewelers' establishments may be able to accomplish something by writing to concerns in Rio de Janeiro. [The names may be obtained from the Bureau of Manufactures.]

PORCELAIN AND POTTERY.

FACTORY SHOULD BE ERECTED IN BRAZIL.

Consul-General Anderson writes further that there is a good opening for the establishment of a porcelain factory in that part of Brazil:

A short time ago a Government license was issued for the formation of a company with a view to establishing a factory in or near Rio de Janeiro and the matter was thoroughly investigated. Several large beds of first-class clay were found near the city, some of them on the shore of the bay, where water transportation could be had at a minimum of cost. Locations of several deposits of kaolin of a very high grade are known, and the projectors of the enterprise have secured options upon them. The Government license is in such terms as to almost mean a monopoly of the porcelain business. The project had for its particular object the manufacture of bathroom and sanitary appliances, but the discovery of clay beds of so high grade changed the plans somewhat. An attempt was made to secure funds for the enterprise in England, but so far the attempt has failed. Americans desiring further information with respect to the project can probably secure it by addressing Dr. J. A. Wilkes, Rua Theo. Ottoni, No. 4, 1st Andar.

Practically everything of the sort now used in Brazil is imported, and there is a good market for all such goods.- Considerably over \$1,000,000 worth of earthenware and china not enumerated in special classes in the Brazilian customs returns were imported last year. Of this amount, Germany contributed one-third, Great Britain almost one-half, and France a considerable portion of the remainder. The United States sent practically none. A Brazilian establishment producing these goods will not only be favored by location, convenient material, and transportation, but is also favored by a tariff which is almost prohibitive in some lines at the present time, and which, doubtless, would be modified to meet the needs of an important industry once established.

DENTISTRY AT RIO JANEIRO.

Mr. Anderson is receiving many American inquiries concerning openings in Brazil for the practice of dentistry, to which he replies:

In Rio de Janeiro there are quite a large number of Brazilian dentists, some of whom are prospering, and others are not. There are also a number of American dentists who have plenty of work at high prices, and while the cost of living and their expenses are very high,

they have large incomes. The advertised prices are 30 to 50 milreis per hour (\$10 to \$16 gold), the actual charges being a little below these rates. These successful dentists, however, are men of experience and attainments and would do well anywhere. To secure a license one must pass not only a rigid technical examination, but must read and write Portuguese fluently. The Brazilians who can supply first-class practice are limited in number and the trade is well controlled, so that it would be difficult for new dentists to secure an opening. American dental supplies are popular and well represented here.

PERU.

GOVERNMENT PROMOTES COMMERCE.

A NATIONAL STEAMSHIP COMPANY TO BE ORGANIZED AND AIDED.

The American minister at Lima, Mr. Irving B. Dudley, transmits a copy of a contract between the Peruvian Government and Nicanor M. Carmona and others, with the object of promoting the formation of a national steamship company and of a floating dock at Callao.

The parties named bind themselves to promote the formation of a company, with residence in Lima, for the execution of the law of February 6, 1906, and which is to be named The Peruvian Steamship and Callao Dock Company. The paid-up capital of the company shall not be less than £300,000 (\$1,460,000), divided into shares of £1 each. The company may issue bonds up to £300,000, setting apart for their service the Government's subvention and its guaranty. The company obligates itself to establish, with six steamers, the following service, alternating the fortnightly service, so that the one on the coast of Peru may be a weekly service:

a. A quick line, at least once a month, which in less than four days will make the voyage between Callao and Panama, touching at two ports of Peru whenever it is possible without prejudice to the rapidity of the trips performed by the steamers, which will have accommodations for at least 100 first-class passengers and be of a capacity of not less than 2,500 tons register and have a speed of 20 miles per hour. While the steamers are being built for this service the company may make the journeys to Panama with the national transport *Iquitos*.

b. A fortnightly line touching at the ports of Peru, and which may extend their trips to Panama, Valparaiso, and the intermediate ports, to be composed of steamers of not less than 2,000 tons register each, with a speed of not less than 12 miles an hour.

c. A fortnightly line between the ports of Huacho, Callao, Pisco, and intermediate ports, and which may extend its service to Santa, on the north, and Ilo, on the south, this service to be performed by steamers of not less than 1,000 tons register and having a speed of 10 miles per hour.

GOVERNMENT RESERVATIONS.

The company obligates itself to establish in Callao, within a period of eighteen months, a floating dock, with sections of steel, which can raise, in two hours, steamers up to 12,000 tons. Peruvian vessels shall

have the right to a reduction of 3 per cent on the tariffs of the dock, and shall also enjoy a preference in its use. One-half the staff of the dock employees must be Peruvians.

Then follow the stipulations usual in such contracts, covering the carriage of Government mail, military stores, employees, the turning over to the Government of the vessels in case of war, the number of Peruvians among the officers and crews of the vessels, etc.

The concessions granted to the company are as follows: An annual subvention of £30,000 (\$146,000); exoneration from all taxes which may affect navigation, and from that of commercial license, mercantile registration, etc.; freedom from custom-house duties on provisions and naval stores of the company, as well as for the preservation, repair, and running of its vessels and dock.

[The copy of the contract forwarded by Minister Dudley (translation), in extenso, is on file in the Bureau of Manufactures, where it may be seen and consulted by those interested therein.]

URUGUAY.

DESKS AND DAIRY MACHINERY.

AMERICAN ARTICLES SHOULD BE THOROUGHLY INTRODUCED.

Consul John W. O'Hara reports from Montevideo that some American roll-top office desks have been sold in Uruguay and are very popular, but that they have hardly been properly introduced as yet. Advertising should be printed in Spanish or French.

The dairy business of Uruguay has been very little developed, the people not yet producing sufficient of such products for the local demands, and butter figures as an import from Argentina. The Swiss colony in the northern part of Uruguay produces practically all the cheese of the country and exports a small amount. The dairy-machinery imports for the nine months ending September 20, 1905, included 29 butter-making machines, value \$647, and 1 cheese-making machine, value \$600, most of these articles coming from Germany. More interest is now being taken in dairying products in Uruguay.

Consul O'Hara supplies lists of importers at Montevideo handling desks and office material, dairy supplies, manufacturers of butter, and tanners of leather. Any of these will be furnished American manufacturers of these lines by the Bureau of Manufactures.

CENTRAL AMERICA.

HONDURAS.

SPECIFIC SHIPPING COMPLAINTS.

AMERICAN EXPORTERS LOSE PRESTIGE BY THESE MISTAKES.

Consul F. S. S. Johnson, of Puerto Cortes, reports some remarkable cases of negligence on the part of American shippers. He advises greater care and cites some notable instances where Americans lost trade already in their possession by paying no attention to instructions. He writes:

Complaint is general here that goods are badly packed by our manufacturers. I have requested all importers of Puerto Cortes to inform me at any time of complaints that they wish brought to the notice of our people of their goods. In response thereto a prominent importer informed me that five months ago he ordered five wagons, to be used on a banana plantation, the wagons to be shipped immediately. Although the order for the goods was acknowledged, with a statement that the wagons had been shipped, none have arrived. The shippers have made no efforts to trace the goods. The result will be that the banana planter will, in all probability, refuse the wagons on their arrival.

From personal observation I find that business is conducted well at this port. The merchants are a class of men who can be approached by any salesman, whose goods will be inspected, and, if adaptable for this country, an order will be given.

IMPORTANCE OF SMALL PACKAGES.

Manufacturers of the United States are at times requested to make packages of a certain size and weight. They are unable to understand why this request should be made. The reason for this is the fact that the goods are sent to the interior on packed mules, which are not able to carry above a certain weight. Americans are losing trade in Honduras by not attending strictly to business. Only a short while ago a manufacturer in the United States thought he knew the best kind of paper for this country for making cigarettes. Instead of following the order sent him he sent a certain paper and lost the trade. Paper is now bought in England, amounting to \$200 per month. Cotton prints, which formerly were mostly all bought in the United States, are now purchased in England, owing to bad packing and inattention to the filling of orders. Cotton goods have arrived here with bales opened and pieces of goods missing. Textile goods should be packed in canvass coverings and with iron bound hoops. Cornstarch, formerly bought from the United States, is now bought in England. Owing to poor

packing and noncompliance to shipping orders, other goods once bought in the United States are to-day being bought in Europe.

There are many ways to increase our trade in Honduras. Discounts should be the same as those made by other countries and time of payment should correspond. Strict attention should be given to carrying out the importer's order. No substitution should be made in case there are none of the articles ordered on hand. Goods should be carefully packed, so as to stand the ocean voyage well, and the condition in which they arrive should be noted on the ship's manifest.

OIL AND BARBED WIRE.

American shippers of oil should examine each can of oil before it is placed on board of the steamer. A general complaint is made that a loss is sustained owing to leaky cans. I believe that this may be due to the handling on board of the steamer or on freight cars. Barbed wire arrives here in a frightful condition. Both of the above-named articles could be imported direct from New York by water, but owing to an agreement with another steamship company the Hamburg-American steamers no longer call at this port.

All cereals for use in this country should be put in cans and not in paper boxes, as they are liable to become wormy. As soon as quarantine is raised against this port, which will be about the 1st of November, salesmen should be here to get orders before they are secured by foreigners. There is no danger from yellow fever in Honduras. All towns in this consular district are free from yellow fever and are in good sanitary condition, the Government having expended large sums to effect this end.

LIFE INSURANCE.

OPPORTUNITY FOR ENTERPRISING AGENTS.

Consul Johnson, also reports an excellent opportunity in Honduras for the introduction of life insurance. It seems as if he has hit upon a field long fallow, one well worth investigating. He writes:

While laws are being enacted in foreign countries protecting home life insurance companies and making it difficult for American companies to do business in those countries, a splendid field presents itself to our people in Honduras. Luckily there is no prejudice against American companies, no discrimination against them in local laws, and no unfriendly feeling on the part of the people. No deposits are asked, nor are there any fees, taxes, or other payments required. A live and active agent could secure many policies not only in straight life but in endowment policies. Few, if any, of the natives carry insurance on their lives. It is a matter upon which they will have to be educated; but after knowing its benefits and worth, I am confident the company which enters this field will secure a large and lucrative business. Agents, I am aware, have been appointed to represent some of our companies in these countries, but as they are engaged in other business they are not able to devote the time they should to insurance.

HOW BUSINESS MAY BE SECURED.

Honduras has thus far failed to enact laws governing or regulating insurance companies, for the reason that the same general laws of

business apply to it that govern any other invested capital. The benefits of life insurance are not generally understood here, and conviction can only be secured by an expert having all the points of the business at his tongue's end, preferably one having a colloquial knowledge of the language of the country, and who would devote his whole time to the business. It was only a few years ago that an American company started an ice factory at San Pedro, which at the time everyone predicted would prove a failure. At first few or no sales were made. To-day the demands exceed the amount manufactured. The same success could be obtained by our insurance companies if they would take hold of Honduras and canvass it thoroughly. Money is plentiful, business is good, and the wages of workmen have doubled since the beginning of the year. Each week American and English laborers are sending home their savings in order to secure interest on them. The people as a rule are thrifty, and if it could be shown that by the taking out of an endowment policy they were getting more money than by placing it in bank, and were at the same time protecting their families, I believe they would do so.

PEOPLE PROVIDENT AND HEALTHY.

In this country no law has been provided for the poor or pauper in the way of pension; there are no aid societies; so if a man gets sick he has to rely on his neighbor for help or aid. I know of no poor-houses where the old or helpless can be sent. Yellow fever, which was once epidemic here, will not, in all probability, be heard of in this port for many years to come, as all places in this consular district have been put in good sanitary condition and a watch is kept on all boats arriving from infected places. This is the only disease which the native dreads. The people here are healthy and live to a good old age. I mention these facts to show that an insurance company has very little risk to assume in insuring anyone in this part of Central America. Literature and forms to be used here ought and should be in Spanish, and values in the currency of this country.

INVESTMENTS IN THE REPUBLIC.

WARNING TO AMERICANS SEEKING WORK AND INVESTMENTS.

Mr. Johnson furthermore warns his countrymen against going to Honduras expecting to be aided home by the consul, or anybody else, in the event of their being unable to obtain work, or in the event of their losing their work after having once obtained it. He says that consuls have no funds for the kinds of cases that come under his notice.

Honduras, he says, is progressive; that money is being invested down there; that the banana trade is good, but that while wages are high so is living. Besides, preference is invariably given to negroes on the banana plantations, for they are better able to stand the climate, hence do better work.

While men are affected by malaria and the part of Honduras to which he refers is troubled with that disease, American capital is being invested, particularly in the banana orchards. Mines are numerous and

rich, but the transportation facilities are bad. He warns his countrymen against putting their little savings into attractive, high-sounding companies who are to pay huge percentages on receipts from copper, sugar, and rubber plantations. He cites the case of three young men who went to Honduras with all they had saved in many years of hard work, but who had to go to the consulate to beg their way back to the States. He says many of the schemes to which he refers are robberies pure and simple. The country is rich and offers many good chances for safe investment, but these should all be carefully examined, references asked for and sought, etc., before a dollar is parted with.

BRITISH HONDURAS.

TRADE WITH UNITED STATES.

EXPORTS TO AMERICA INCREASE—RAILROAD BUILDING.

Consul W. L. Avery, of Belize, reviewing the trade of British Honduras for the six months ending December 31, 1905, says:

The quarantine enforced against Belize because of yellow-fever infection was a great detriment to trade, and the outbreak of yellow fever in New Orleans compelled an enforcement of quarantine against the city with which the colony transacts four-fifths of its commerce with the United States. The last case of yellow fever in British Honduras terminated fatally on November 25, so that for the last six months of 1905 there was virtually no passenger traffic nor any visits from commercial travelers, this last being a most serious drawback.

The exports from Belize to the United States for the six months ended December 31, 1905, showing increase and decrease, compared with the same months of 1904, are given below.

	1905.	In-crease.	De-crease.
Bananas.....	77,518	27,603	.....
Cocoanuts.....	62,179	26,684	.....
Chicle.....	141,452	89,878	.....
Cedar.....	1,920	1,921	.....
Deerskins.....	None.	.....	556
Hides.....	933	.....	846
Logwood.....	25,120	25,120	.....
Mahogany.....	116,254	.....	11,789
Mangrove bark.....	None.	.....	116
Old metal.....	671	.....	63
Plantains.....	4,681	.....	3,096
Rubber.....	9,895	.....	2,392
Sponges.....	442	298	.....
Sarsaparilla.....	305	297	.....
Stuffed birds.....	405	405	.....

This makes a net increase of \$152,800 in round numbers. The imports from the United States show the effects of bad health conditions, the decrease for the six months being over \$60,000 in declared value.

ELECTRIC-LIGHTING CONCESSION.

On September 30 a much needed enterprise was sanctioned by the Government. It was the granting of an electric-lighting concession

for the town of Belize to Joseph Lewis, an American citizen. The concession is for twenty-five years, and the electrical-supply houses of the United States will find a new market, though it will be restricted to the needs of a town of 9,000 people.

The outlook for increased trade during 1906 is brightened by the prospect of a grant for a 60-mile railway from Staun Creek, 30 miles south of Belize, to the fertile Crown lands westward, a prospect sure to be realized to the extent of voting the money, perhaps even to the beginning of the work, but dependent, however, on the colony regaining and maintaining the healthful conditions that prevailed from 1891 to 1905.

COSTA RICA.

COMMERCE WITH UNITED STATES.

TRADE WITH THIS COUNTRY ON THE INCREASE—BANANA BUSINESS.

Consul Chester Donaldson, of Port Limon, furnishes the following report on the imports into Costa Rica for the year 1905:

The total imports amounted to \$5,239,477, of which the United States supplied articles valued at \$2,706,063; Great Britain, \$940,969; Germany, \$615,101; France, \$249,821; Spanish America, \$262,837; Spain, \$122,822; Italy, \$154,730; Belgium, \$22,407, and all other countries, \$164,677.

The following statement gives the total value of 25 articles and the value of each from the four leading countries:

Articles.	Total.	United States.	Great Britain.	Germany.	France.
Agricultural implements.....	\$97,871	\$75,358	\$12,000	\$7,700	\$1,434
Books	18,043	6,209	3,793	4,638	2,449
Breadstuffs	533,035	520,280	11,135	929	143
Candles	32,264	3,034	24,985	4,245	.....
Carts	71,476	70,994	1,462	278	120
Cement.....	28,457	6,151	2,151	12,055	.....
Coal	31,779	13,838	17,941	.....	.....
Cotton goods	815,177	230,411	356,712	89,641	52,405
Drugs	100,952	45,841	19,693	14,701	15,941
Earthenware.....	23,594	937	1,410	20,454	394
Electrical apparatus, etc	33,707	32,522	197	877	91
Fish	87,417	55,370	10,345	5,837	4,524
Furniture	40,063	23,422	3,441	7,185	2,301
Grease.....	17,374	15,226	2,148	.....	.....
Hats, all kinds	57,919	15,331	8,186	5,641	17,698
Iron and steel, manufactures of.....	463,188	287,307	98,192	60,363	4,841
Leather and leather goods	96,874	59,462	5,200	31,500	2,450
Paper and stationery.....	97,802	43,341	8,671	29,999	7,883
Paraffin	48,118	43,937	3,793	398	.....
Provisions.....	178,430	140,839	4,429	12,574	471
Rice	111,136	12,500	.....	50,645	.....
Rope	22,461	19,002	2,465	51	.....
Sacks, coffee.....	49,048	2,208	42,102	4,693	45
Spirits, wine and beer.....	165,332	31,626	14,298	33,209	53,526
Woolen goods	212,043	5,499	123,428	42,758	34,362

American shoes are very popular and all the imports come from the United States, but have fallen off considerably since the duty has been raised to about \$3 a pair, thus increasing the cost from \$2.50 to \$6 a pair. This high duty was put on shoes to protect the home manufacturers, of which there are two in San José.

Since January 1, 1906, there has been a large increase in both imports and exports. The increase in imports has been in railroad materials for new lines now being built to connect the interior with the Pacific—15 miles between Santo Domingo and Esparta and 9 miles between Alajuela and the Pacific line at the nearest point. These connecting lines will be completed and ready to be opened to the public within a few months. The increase in exports is due to the great production of bananas, which was 2,000,000 bunches more than last year. For the months of April and May the exports of bananas reached 1,000,000 bunches a month, and for the year ended June 30, 1906, they will run to 10,000,000 bunches, valued at \$4,000,000.

THE WEST INDIES.

BERMUDA.

VALUABLE IMPORT TRADE.

Consul W. Maxwell Greene, of Hamilton, sends a report on the trade of Bermuda covering the last calendar year:

The year 1905, as compared with 1904, showed a decrease of imports amounting to \$200,000. The decrease from the United States was \$147,219. In proportion to its population the import trade of Bermuda is valuable, reaching an average of \$87 per capita. It well merits the attention of the American exporter, and there is no reason why, with enterprise and push, the United States, having a regular and frequent communication with the colony, should not lead in all classes of goods. Great Britain is fully alive to the situation, and not only keeps her large trade, but is increasing it, especially in clothing, cotton goods, and canned goods. The flour trade shows a tendency to pass largely into British and Canadian hands. In malt liquors, spirits, wine, cigarettes, and tobacco, Great Britain is easily first. Canada also gains continuously in flour, provisions, hay, grain, and feed, besides appearing as a new competitor in such lines as boots and shoes, jewelry, cotton goods, and paper.

FOREIGN TRADE.

The total imports into Bermuda for the calendar year 1905 amounted to \$2,594,965, of which the United Kingdom contributed \$822,694; Canada, \$394,899, and the United States, \$1,288,661. The principal articles of import from these countries are shown in the following table:

Articles.	United Kingdom.	Canada.	United States.
Animals.....		\$13,476	\$156,579
Breadstuffs.....	\$24,766	119,798	130,934
Building material.....	46,354	715	20,794
Carriages, cars, other vehicles and parts.....	3,815	954	15,783
Canned goods.....	77,047	9,071	52,510
Cigars, cigarettes, and tobacco.....	24,421	637	19,174
Coal.....	9,028	214	23,864
Coffee, cocoa, and tea.....	8,823	8,258	11,782
Confectionery.....	2,959		2,959
Drugs.....	10,361	2,049	25,569

Articles.	United Kingdom.	Canada.	United States.
Fertilizers		\$457	\$22,970
Fish		30,104	17,057
Groceries	\$2,998	4,278	32,007
Iron and steel, manufactures of	21,883	472	76,256
Jewelry and plated ware	18,366	7,966	11,704
Leather, and manufactures of	8,809	8,888	64,111
Oil, paint, etc			50,016
Paper, and manufactures of	10,176	5,271	17,115
Provisions	462	89,077	214,868
Spirits, wine, and malt liquors	153,799	925	7,864
Sugar	11,797	341	37,769
Textiles	285,295	3,348	79,665
Wood, manufactures of	7,427	36,509	72,288

The total exports amounted to \$593,028, of which \$528,769 were sent to the United States, \$23,004 to the United Kingdom, \$14,468 to Canada, and \$26,863 to West India Islands. The principal articles exported to the United States were: Onions, \$294,367; potatoes, \$110,909; bulbs, \$27,153, and other vegetables, \$21,938.

JAMAICA.

PETROLEUM IMPORT REGULATIONS.

Vice-Consul W. H. Orrett, of Kingston, has furnished a copy of the law recently passed by the colony of Jamaica for the regulation of the importation, storage, and sale of petroleum. It is provided that the term "petroleum" shall include all natural mineral oils, whether refined or unrefined, all kerosene and paraffin oils, naphtha, petrol, gasoline, and all hydrocarbons, whether natural or manufactured, which give off inflammable vapor at a temperature at or lower than 145° F. Petroleum giving off inflammable vapor at a temperature lower than 95° F. shall not be imported, stored, or sold in vessels containing more than 8 fluid ounces each, except in strong steel drums so constructed as to prevent leakage or escape of vapor. Penalties and forfeitures are prescribed for violation of the law. It is provided that every person selling petroleum shall first obtain a license. The full text of the law is on file with the Bureau of Manufactures.

CUBA.

GREAT INCREASE IN IMPORTS FROM THE UNITED STATES.

The growing commerce of the United States with Cuba is shown by the statistics for the fiscal year 1906, which ended June 30.

The increase in shipments to Cuba, while visible in many articles, occurs chiefly in the manufactures of iron and steel, of which the total exports to the island were \$9,879,648, against \$6,164,908 in 1905. The total American exports to Cuba aggregated \$47,763,688 last year. This was 25 per cent greater than 1905, 75 per cent greater than in 1904, and about 120 per cent greater than in 1903.

The imports from the island fell slightly below those of 1905, due to the fall in the price of sugar. Of the five articles forming the bulk of American imports from Cuba, sugar amounted in value to \$60,000,000, tobacco \$13,500,000, cigars and cigarettes \$4,000,000, iron ore \$2,000,000, and bananas \$1,000,000.

ST. PIERRE ISLAND.

COMMERCE AND FISHERIES FOR THE PAST YEAR.

Commercial Agent C. M. Freeman, of St. Pierre, transmits the following report on the trade of that small but enterprising island. He says:

The total value of the commerce of St. Pierre Island for the year 1905 amounted to \$2,419,993, of which \$1,045,967 were imports and \$1,374,026 exports.

The imports from the United States were valued at \$196,273, and consisted of the following principle articles: •Animal products, \$32,344; cloth, etc., \$6,691; anthracite coal, \$20,160; flour, \$70,160; food for consumption, \$25,571; leather, \$1,510; manufactured lumber, \$4,777; paint, \$1,316; and rope, \$7,119.

England furnished the greater part of anchors and fishhooks; Holland, smoking tobacco, gin, and cigars; and France, sugar, wine, salt, cordage, paper, and other manufactured articles.

The results of the fisheries were as follows, in pounds: Codfish, 28,835,510; cod roe, 502,847; oil, 334,184; sounds and tongues, 597,122; and, besides, 162 cases of lobsters.

The first trip to the fishing banks is drawing to a close, and at the present date, June 7, 1906, about one-half of the fishing fleet has arrived, bringing a catch amounting to 16,500,000 pounds. If the remainder of the fleet does equally as well the result will be an increase in the product over last year of 75 per cent. Capelin, the bait used, has come to the island in great quantities; as a result the bait is both cheap and plentiful.

EUROPE.

KINGDOM OF ITALY.

A SULPHUR TRUST.

GOVERNMENT ORGANIZES A COMBINATION TO GOVERN PRODUCT.

The new Italian law enforcing a union of all the sulphur mining companies of Sicily, reported by Consul Benjamin F. Chase, of Catania, is of special interest because that island furnishes about 500,000 tons of sulphur per year or 80 per cent of the world's production. Mr. Chase writes:

The new law in effect August 1 regarding the Sicilian sulphur industry is very radical in its provisions. It amounts to the practical confiscation of the mines for a period of twelve years and also of the sulphur in stock, not refined, owned by different people and societies. This is especially true of about 360,000 tons owned by the Anglo-Sicilian Sulphur Company, whose rights expired July 1. This becomes the property of the obligatory company in the manner and at the price fixed by the law. It might be said that this new law, before its adoption, was the cause of much discussion in the local press and by individuals and, although opinions differed radically as to its utility, it is now a law and time alone will demonstrate whether such a trust will prove beneficial to the mine owners, the sulphur mills, the island of Sicily, and the users of sulphur in general dependent upon this market for their supplies.

The owners of the refineries of Catania, and there are many, as Catania refined over one-third of the total sulphur put out in Sicily, have already filed a protest with the Government for the arbitrary action of the commissioner in fixing the selling price of the sulphur at Catania at a much higher price than at either Licata or Girgenti (prices herein noted as fixed by the commissioner). They allege that this discrimination will result in closing the many refineries or mills of Catania and cause not only a heavy loss to the owners but will throw hundreds of laborers out of employment. They demand that the price of the raw sulphur be made the same at the three ports named.

By a royal decree issued since the law was approved the Special Junta has been formed with its principal seat at Palermo. The commissioner has issued his order establishing nineteen warehouses at Porto Empedocle (near Girgenti) and five at Licata on the southern coast of the island, and two at Catania. He has fixed the fees in lire (a lire being worth 19.3 cents) to the warehouse men for each ton of sulphur, as follows:

	Port Em- pedocle.	Licata.	Catania.
Deposit and custody of sulphur.....	1. 65	1. 60	1. 20
Unloading cars and hauling from station to the warehouse.....	. 85	. 80	. 70
Putting on ships:			
Weighing.....	3. 00	2. 60	{ . 60
Hauling.....			
Total	5. 50	5. 00	3. 45

He has also made very stringent rules for the management of the warehouses.

The special junta, acting through its president, the commissioner, fixed the market price of the raw sulphur from August 1 to 15 per metric quintal (220.46 pounds) placed at the ship, excluding special tax of subscription at the ports named, as follows:

Quality.	Girgenti.	Licata.	Catania.
	<i>Lire.</i>	<i>Lire.</i>	<i>Lire.</i>
2 V. (advantage)	9. 10	9. 30	.....
2 B. (good).....	9. 05	9. 25	9. 65
2 C. (current).....	9. 00	9. 20	9. 50
3 V. f. m. (not mixed).....	8. 75	9. 10	9. 85
3 V. uso.....	8. 60	8. 75	9. 15
3 B. f. m.....	.....	.....	9. 10
3 B. brucio (burnt) .....	.....	.....	9. 05
3 B.....	8. 45	8. 60	.....
3 C.....	8. 25	8. 45	8. 95

SPECIAL SULPHUR LOAN BANK—SALES NOTES.

The law provides an Independent Mining Bank of Credits for Sicily, with a capital of 2,000,000 lire, which may make advances to the producers of sulphur at a maximum premium of 5 per cent, with security upon the raw product or other equivalent. The owners of unworked sulphur deposits must declare whether they intend to consign their sulphur to the company or sell it to the company itself. In the second case the price will be calculated at the fixed rate of 59 lire per ton. They will receive in return company obligations bearing 3.65 per cent net interest, exempt from all tax, and payable semiannually, the principal being redeemable within twelve years by means of annual drawings, one-twelfth each. The Government guarantees both interest and principal of the obligations.

The financing of the warehouses is to be jointly undertaken by the Bank of Sicily and the Central Bank of Savings Victor Emanuel, and citizens or organizations may join in providing the capital.

FINANCIAL OPERATIONS AND ADMINISTRATION.

The sulphur company or trust as it makes sales will deposit the proceeds in the Bank of Sicily. All its deposits will be kept by the bank as security in favor of the Government for guaranty of the loan obligations, and subordinately with security in favor of the Bank of Sicily to reimburse the shares of capital conferred by it. Such sum will be annually appropriated for this purpose. Covering this feature article 23 states:

The capital of the Independent Bank of Mining Credits for Sicily will be furnished from the treasury of the Kingdom without right of refund for the sum of 2,000,000

lire by insertion in the charge for operations 1905-6 whenever the savings of the work itself are enough to cover the said assignment, and for the other 2,000,000 from the Bank of Sicily (out of its reserve) as needed with lowest interest, to be reimbursed by the sulphur company rateably in a term not greater than eight years.

The company is to be administered by a committee of 50 delegates, a council of 13 administrators, and by a director-general, the last being named by the Italian Government. The expenses of administration are limited to 1 lira per ton, and for the relief of idle workmen caused by restriction of output or by illness to 4 lire.

[The full translated text of the new law may be examined or copied at the Bureau of Manufactures.]

MUSIC IN MILAN.

DANGERS AND DIFFICULTIES THAT BESET STRANGERS.

Consul J. E. Dunning, of Milan, writes in detail about the dangers that beset strangers who go to Milan for the purpose of pursuing musical studies, particularly vocal. He presents the difficulties in dark colors, and warns his countrywomen against going to Italy unless guided by their own teachers and with a full belief that their career can not be achieved in any other way. The consul says girls should know just what they want, should arrange carefully and under the best advice about boarding, lodging, etc. No girl should go to Milan before she has taken every precaution to inform herself upon every subject connected with her stay as a student in that city. Consul Dunning's report is in response to a number of inquiries concerning conditions surrounding American music students in that city. He writes, in part:

Milan continues to be the center of vocal-music instruction in Europe. While the influence of La Scala is by no means what it used to be, on account of the comparative inferiority of the artists appearing there, the quality of the orchestra still renders it the most noteworthy opera house in the world; while it is only in Milan that the ambitious young singer is able to work herself into intimate touch with the managers and impresarii on whom her future depends in so great a degree.

The consul's first advice to the American girl considering a course of music instruction abroad is, Don't come. If she persists in coming in spite of that she should give some serious consideration to the counsel of those who, being on the ground and viewing it impartially, can tell her something to her advantage. Assuming that the girl is so ambitious and earnest and has been so encouraged by her home teachers that she is bound to get the foreign training, she ought first to acquaint herself with every detail of the life she is about to enter before sailing or even preparing to sail from the United States. She ought first to be sure of her voice—either that it is operatic both in quality and dimensions or that it is fitted for lyric singing in a degree sufficiently important to render desirable a foreign finish to her American instruction. In this she ought to be guided solely by her own teachers at home who have watched her work and understand her temperament. The kind words of enthusiastic friends should not be allowed a hearing in the making up of this decision. The whole operation should be a

cold-blooded estimate, with everything in the shape of a reasonable doubt thrown in favor of the stay-at-home side of the case.

PRELIMINARY PREPARATION.

Having decided that she has something in her throat and temperament which can not be developed in the United States, the student should place herself in touch with people who know Milan. She should find out all about the city and its people, the conditions and costs of living, the way of getting there, the methods of music instruction, the climate, and so on. Besides, she should not buy her steamer ticket until she has seen and talked with some other woman who has been studying in Milan long enough to know what she is talking about when she describes the situation. The moment she determines on coming to Italy she should begin the study of Italian, which is a difficult language in every sense of the phrase, and can not be "picked up," as a not inconsiderable number of enthusiasts have fondly expected. The simpler the system the easier the learning of the language will be. Complicated grammars should be avoided. Children's primers will do. The student will make the best progress if she digs at simple grammar exercises two hours a day, one in the morning and one in the afternoon, and then gets some native Italian to speak to her at least twice a day for a few minutes. No worry need be expended over quality of accent or diction. The peanut man on the corner will serve as well as anybody. The main thing is to get to speaking the language so that the student can make herself understood. The Milanese are a wonderfully keen and good-natured people, and the American can make herself understood among them with a surprisingly small stock of conversational Italian. She can get her accent later.

CHOICE OF A HOME.

The student should learn before sailing the names of Italian families who are willing to take American singers as "boarders." It is very difficult to get into an Italian family of the first class or even of the middle class—just as difficult as it would be for an Italian girl to do the same thing in the United States. Care must be used on both sides. There is a local prejudice in Milan against singers and students, and in the mind of the newcomer there is an answering prejudice and often genuine fear in the presence of strange surroundings and in a country which bad report has not given a particularly good name among single women. Nothing could be more unjust. Milan is the same in these ways as are Boston and New York. Practically everything depends upon the girl herself. Allowing for the more or less embarrassing experiences that inevitably fall on the stranger in a strange land, her comfort when living alone and going unattended about this great cosmopolitan city will depend, as it would depend at home, very largely upon herself. If she will mind her own business and remember that most of the disconcerting attention paid to her is due to the overwhelming curiosity of an otherwise extremely polite and considerate people, she will have no trouble on that score, and if accidents do happen, her American common sense will get her out of them. There are few cities in America so safe and clean and wholesome in certain important ways as Milan is.

If the student can not find an Italian family she must find a boarding house or "pensione." This is difficult if all of her senses and sentiments are to be suited at one and the same time. Probably she will have to be contented with suiting a reasonable portion of them. It is possible to get a good pensione in Milan for 7 francs a day, which includes everything as to board and lodging excepting hot water. The smaller hotels are infinitely preferable to any of the pensioni, but the price is at least as much, and to the unaccompanied student a hotel is not an agreeable place in Milan any more than in American cities. Cheaper boarding houses can be had for 6 francs a day, all included. There are one or two in Milan giving board and lodging for 5 francs. They are clean and respectable and a good many successful students have lived in them, but they will offend the expectations of the new arrival unless she is fully prepared to meet them on their own ground. She will have to climb a great many stairs to get into one of them, and neither the board nor the lodging will be so good as she could find anywhere in America for \$1 a day.

COST OF LIVING AND INSTRUCTION.

The consul can not advise any single young woman coming here to study to try to live on less than 5 francs, equal to \$1, a day, unless she enters a private family where the cost might be less if she exchanged lessons in language with members of the household. If she were remaining a long time in one house, however, she might get a rate of 135 francs per month in a very modest pensione at the top of a good many stone staircases. She will be supplied, whether in a pensione or hotel, with coffee and bread in the morning, luncheon at 12 or 12.30, and dinner at 7. Butter will cost extra, as a rule. The wine, which will be served on the table, should be avoided. No American should begin to drink Italian wines until he has been here over a year, and then sparingly. They are constipating and indigestible. The Milan drinking water is perfectly safe, has a deliciously refreshing taste and a brilliant, sparkling color. The food will be comparatively scanty and poor, because most Americans bring the national habit of overeating to Italy with them. But it will be fairly wholesome, and in an amazingly short time the student will be taking it with a good appetite. Meats will be found coarse and bad. In hot weather they are dangerous. They should be avoided absolutely in July and August, and treated with reserve at other times in favor of the vegetables which the Milan market furnishes in abundance and of rare quality.

INCIDENTAL EXPENSES.

As to incidental expenses, washing in Milan is cheap—one of the very few things that is. One woman does the washing and another does the ironing. The total cost will be as much as one-third less than is paid in America and the work will be just as good. Car fare is 10 centesimi, the equal of 2 cents, which is not so cheap as it looks, because no transfers are given, and it costs more to ride across town in Milan than it does to go five or six miles into the suburbs of the big American towns of the same class. Public cabs are comfortable, numerous,

convenient, and cheap. There is a tariff in every carriage, and most of them also have taxometers. The fare is 1 lira, equal to 20 cents.

Theater going is expensive. Boxes at La Scala sell at from \$50 to \$20 for an average night, and good seats on the floor cost \$6, \$5, and \$4 each. In the smaller opera houses and theaters the prices are about as in America. The only way the American visitor finds theater going cheap in Italy is by going into a part of the house where she would not want to be seen by her friends if she did the same thing in a playhouse at home. However, a great many Americans do it, and under those conditions the prices are what they would be anywhere, cheap—from a lira and a half to 2 lire, or from 30 to 40 cents.

SINGING LESSONS.

Singing lessons will cost 150 lire a month, or \$30, if one is taken every day, and half that if three times a week. One of the best teachers in Milan can be had at that price. The choice of a teacher will depend in part on the resources of the student, as the teachers differ in prices and terms. In any event, the consul, after making careful inquiries among experienced students here, is of the opinion that no girl ought to come to Milan with less than \$75 per month coming to her regularly. A hundred dollars would be a great deal better. I think that with less than \$100 the girl would not infrequently be embarrassed. Milan is an exceedingly expensive city. Nearly everything costs as much as it does at home, and so many things cost more that the average is not favorable to the common belief entertained in America that one can live "for almost nothing in Italy." If one attempts to live in anything like the style accustomed to at home the cost will be greater. During the long cold Milan winter, when the student must dress just as warmly as she would for New England weather, she will not only be in serious discomfort but in danger if she does not provide for a warmed room, and fuel is more than twice as expensive as in America. Clothes cost about the same.

CHOICE OF TEACHER.

The greatest care should be exercised in the choice of a teacher. There are only a few good ones out of all the large number. Most of them are merely lying in wait for the American girl with money to spend, and they will offer her a long series of excellent reasons for spending it just so long as it holds out. Caution should be taken as to the teacher's method. The student's voice may be ruined, and a great many voices are ruined every year by teachers who think more of some trick of method than of the girl taken in hand. But even when the student is satisfied that she has come upon one of the experienced, conservative, highminded, and thoroughly delightful men, who it is a pleasure to say are to be found among the Milan teachers, she must know something of his method and of his work with other pupils. She can find these things readily by making acquaintances in the student colony. The consulate never recommends one teacher as against any other. It is wiser for the student to ascertain from other students the real situation in this regard, and particularly to interview Americans who have been studying here for a number of years. She must always remember, however, that her own judgment is worth

more than that of others and that it is never possible to hear quite an unprejudiced report on any teacher.

CLASS OF TEACHERS TO AVOID.

She will encounter all sorts of unscrupulous efforts to get her into the hands of this teacher or that; and the best advice I can give her is to come to this part of her problem with exceedingly strong suspicions, which she will relax only for the very best of reasons. If it were proper and permissible, I could give ambitious students some very sobering tales of American girls who have come to Europe and fallen into the hands of music teachers who have kept them going until their funds were exhausted and then dropped them out into the cold world with neither voice nor money left. There are good men here, but the newcomer must not take anything at first sight. She should seek the advice of impartial and experienced persons before taking any step, and in this way the consulate is always at her service. From the time she makes herself known as a seeker after honors until the hour before she goes on the stage for her *début* in some up-country opera house before a merciless crowd of provincial critics, she will find herself the subject of constant demands for money. Getting a theater means that half a dozen men must be hired to let the *début* proceed, else they will ruin everything in one way or another. Costuming is expensive, and dressmakers are quarrelsome and avaricious. In short, from the moment the American girl sets foot in Italy, she must remember that some one is trying to get away from her the small means with which she is presumably furnished, and that some exceedingly brilliant fairy tales will be spun for her entertainment while the demonetizing process is going on. Everything depends on how she chooses the man to whom she intends intrusting her voice. She must remember that he will either make it or break it.

AMERICAN GIRL ACCOMPANIED BY PARENTS.

Little of this report applies to the American girl who comes here in the company of her father or mother or of both. The situation in that case is so different as to require no report whatever. In every case where this can be done it ought to be arranged, not only for the added comfort and security in which the girl will be able to work, but because in the long run her voice will profit by the more natural and wholesome conditions in which she will be living, and by the advice she will be able to receive at short range. The whole attitude of the foreign music field changes toward the American girl who comes here with her father to stand with her. She sees the delightful side of the life without any of its battles. Nothing which I have said or caused to be inferred above is intended for her.

MILAN CONSERVATORY OF MUSIC.

The Milan Conservatory of Music is by all means the best place for the American student, but few of them have been there on account of the comparatively high cost of tuition and expenses. It is a government-patronized institution with an almost unrivaled reputation, and the student who goes there is relieved from all responsibility in the

choice of a teacher and all uncertainty as to the quality of the method. While it is not within the province of the consulate to give any extended exploitation of the work of the conservatory, I commend it to the attention of intending students, who can secure full information, no doubt, by addressing the director through the mails.

COMMERCE AT LEGHORN.

STEADY PROGRESS IN GROWTH OF FOREIGN TRADE.

Consul J. A. Smith transmits the following report on the commerce of Leghorn, Italy. The imports from the United States decreased more than one-half million dollars, the principal item being tobacco. The consul writes:

The foreign trade continues to show a gain each year. The combined value of imports and exports during 1905, was \$27,234,677, an increase of \$1,522,790 over 1904. Of this gain all but about \$65,000 was in imports. Large increases were shown in the imports of salted fish, sugar, and wheat, and less important ones in coal and coffee. Imports of tobacco largely decreased. Exports of boracic acid, hides, worked marble, wine, and olive oil show a gain, while hemp, coral, rags, and straw hats declined.

The principal articles of import were: Coal, \$2,085,937; fish, \$1,850,575; leaf tobacco, \$793,319; wheat, \$3,101,205; rawhides, \$1,266,520; sulphate of copper and iron, \$361,198; wool and woolen goods, \$386,255; mineral oil, \$115,644; pig and scrap iron, \$218,159; carbonate of soda, \$100,449, and cotton and cotton goods, \$174,001.

TRADE WITH UNITED STATES.

The imports from the United States decreased by nearly \$530,000. This was, however, more than covered by the decline in shipments of tobacco, which showed a falling off of \$800,000. Slight decreases are shown in the imports of copper, gums and resins, and mineral phosphates. Olive oil continues to head the list of exports. The total imports, by articles, are shown in the following statement:

Articles.	Value.	Articles.	Value.
Breadstuffs	\$88,580	Oxide of zinc.....	\$6,639
Cotton goods.....	2,288	Paraffin	91,958
Copper, brass, etc.....	674,043	Sulphate of copper	46,189
Fish, cured	15,803	Tobacco	788,624
Grease	97,824	Varnish	2,692
Hides	15,405	Wood, manufactures of	53,569
Lead	63,980	All other articles.....	9,633
Mineral phosphates.....	56,886		
Machinery, etc.....	82,713		
Oil, various kinds	216,692	Total	2,266,518

The value of the exports were \$1,842,969, and consisted of the following principal articles: Cheese, \$340,992; olive oil, \$721,839; soap, \$178,716; wine, \$61,947; argols, \$46,998; soap stock, \$77,661; candied citrons, \$24,389; rags, \$46,662, and umber earth, \$16,770.

CHANCE FOR BUCKBOARDS.

NORTH ITALY NEEDS THE LIGHT AMERICAN VEHICLE.

Consul Paul Nash reports from Venice that the mountainous regions of central and northern Italy are becoming more and more important as summer resorts, and, although the hotels are being rapidly modernized, the vehicles which one must take to reach them remain the same heavy, lumbering barouches or distorted victorias of a half century ago. Mr. Nash continues:

It has often struck me that our buckboards would meet with great success in these regions, as well as in the Austrian Tyrol and Switzerland, were they once properly introduced. The cost, even considering the transportation and duties, would be much less than that of a vehicle of corresponding capacity of the kind now in use here, and the lightness would result in a great economy in horseflesh.

I believe that an enterprising firm, with agents operating from a series of depots, would build up a good business in a comparatively short time, and hence strongly advise any manufacturer of buckboards who desires to extend his trade in this direction to give the matter his careful consideration. No sales are likely to be made by means of catalogues; it is absolutely necessary to place the sample directly before the people in order to induce them to buy.

EMIGRANTS' SAVINGS.

INCREASING REMITTANCES FROM ITALIANS ABROAD.

Consul-General Hector de Castro shows an increasing growth in the home remittances of Italian emigrants abroad. He writes from Rome:

The Bank of Naples has been extending its operations of transmitting to Italy the savings of Italians working in foreign countries. An inspectorate having influence on the whole of the United States and Canada was instituted in New York, rendering more popular the easy transmission of savings by checks. These funds handled by the bank in 1905 came to \$5,626,396. The amount from the United States was \$4,359,864, an increase over 1904 of \$44,613; from Canada, \$6,264, an increase of \$5,662; from Brazil, \$433,578, a decrease of \$288,087; from Argentina, \$827,651, an increase of \$304,450. Besides these remittances other sums convertible in savings banks deposits were remitted in 1905 to an extent of \$2,057,181.

STRAW HAT MAKING.

ITALIAN METHODS FOR PRODUCING THE RAW MATERIALS.

Vice-Consul S. Bernardi reports from Florence on the methods in Italy for growing and handling straw for making hats. It may be remarked that straw materials for hats were imported into the United States from all countries for the year ending June 30 to the value of \$2,373,189, and straw hats to the value of \$2,197,995. Some interest is therefore being manifested in the extension of the industry in this

country, both for the further supply of home markets and for export. M. Bernardi writes:

For straw employed in making hats, the wheat is sown as thickly as possible in order that the growth of the plant may be impoverished as well as to produce a thin stalk, having toward the end, from the last knot, the lightest and longest straw. The wheat blooms at the beginning of June and is pulled out by hand by the roots when the grain is half developed. If allowed to remain in the ground a longer time the straw would become brittle. About five dozen uprooted branches, the size of the compass of two hands, are firmly tied together into little sheaves and stowed away in barns. Then the straw is again spread out to catch the heavy summer dews and to bleach in the sun. After additional bleaching the straw is cut in small bundles and classified. Finally it is cut close above the first joint from the top and again tied up in small bundles, containing about 60 stalks each, and delivered to women in almost every private dwelling of the lower classes.

Consul-General R. Guenther, of Frankfort, writes, quoting German sources, concerning hat making in Italy. He finds the industry increasing steadily. He says:

The exportation of straw hats is an important item in Italy's foreign trade balance. Of late years the manufacture of wool and felt hats not only covered the home consumption, but contributed to Italian exports. The finest hair hats are made in Alessandria and in Intra, on Lake Maggiore. Medium-quality felt hats are made in Biella, Chivazza, Andorno, Sagliano, Micca, and Tarigliano.

The town of Monza is the chief center for the manufacture of woollen hats. Here 14 factories were formed into a syndicate or trust which employs about 7,000 operatives. Of the Monza production, about \$1,300,000 worth, is annually exported, the chief customers being Roumania, Austria-Hungary, and Switzerland. The daily production of Monza averages 150,000 hats. Factories manufacturing fine hats, composed of hair, for export trade, are in various cities. The straw-hat manufactories of Tuscany, employing about 85,000 operatives, export to foreign countries over \$5,000,000 in value. Most of these hats go to the United States. The town and vicinity of Carpi, in the province of Emilia, also manufacture straw hats, of which about \$1,300,000 worth are shipped abroad. Our fine American-made soft hats should and would find as ready a sale as the Italian hats do in the markets of Europe if properly introduced.

PORTUGAL.

PROGRESSIVE MOVEMENTS.

LISBON IMPROVEMENTS—THE FRENCH KONGO.

H. P. Fletcher, United States chargé d'affaires at Lisbon, submits some trade notes that may be of benefit to American merchants and manufacturers, as follows:

The Portuguese Government, it is understood, will present to the Cortes a draft of a law relative to important improvements in the port

of Lisbon. The Commercial Association of Lisbon has petitioned the Government to erect new structures for the unloading of ships in front of the custom-house, but it is proposed to build the new terminal station for the south and southwestern Portuguese railways on this location.

The recent formation and extraordinary success, both in membership and in work accomplished, of an association whose aim is to improve Portugal's trade, to introduce more travelers into Portugal, and generally to quicken her connection with the outside world will contribute materially to the growth and prosperity of the city of Lisbon, which has advanced rapidly in the last few years until it is now a modern up-to-date city. Handsome buildings, both residential and business, with all latest conveniences are in course of construction in all parts of the city. A good opening seems to be offered for structural steel, elevators, and building materials of all kinds. Direct communication between the United States and Portugal is now limited to the monthly sailings of the *Empresa Insulana de Navegação* from New York and New Bedford to Lisbon, calling on the way at the Azores and at Madeira.

A copper-bearing region in French Kongo, some 200 miles inland, is now (July, 1906) being exploited by various French financial interests. The enormous latent resources of French Kongo should prove an inviting field for American machinery, while with the stimulus recently given to cotton growing in this and other French colonies such articles as the Lowry cotton chopping and picking machine would probably find a ready market.

An important step in African railway construction was taken by the completion of the first section of the railway from the growing port of Conakry, the chief town in the Futa-Djallon district of the French colony of Senegambia and the Niger, and the finishing of 51 kilometers of the second section, more than half completing a railway which is destined to be of great importance in opening the fertile Futa-Djallon tableland to commerce. The adjoining British colony of Sierra Leone imports from the United States flour, lumber, kerosene, etc.

COMMERCE AT MADEIRA.

IMPORT TRADE—WINE AND SUGAR PRODUCTION.

Consul Maxwell Blake, of Funchal, reporting on the foreign commerce of Madeira for 1905, says:

The total volume of commerce for 1905 was \$3,140,800, the imports being \$2,099,173 and the exports \$1,041,627, of which the United States furnished \$385,789 in imports, a loss of \$42,465, and the exports thither amounted to \$22,675, an increase of \$3,751 compared with 1904. The imports from the United Kingdom amounted to \$910,035, a decrease of \$171,208, and the exports thereto \$178,732, a loss of \$36,189 as compared with 1904.

The principal imports were: Coal, 129,223 tons; maize, 10,524 tons; petroleum, 91,212 gallons; staves, 321,975; lumber, 90,704 cubic feet; wine, 259 pipes; wheat, 6,139 tons; paper, 146,970 pounds; tobacco, 5,209 pounds; candles, 42,543 pounds; dry goods, 365 tons; and molasses, 2,262 tons. The chief articles of export were: Wine,

721,710 gallons; embroidery, 51 tons; boots and shoes, 1,839 pairs; onions, 795 tons; fruit, 374 tons; and 2,411,880 eggs.

WINE PRODUCTION.

Wine, which furnishes the principal article of export, was of standard quality. The vintage for 1905 was estimated at 880,000 gallons, an amount slightly in excess of the demands of the export trade and local consumption. About 440,000 gallons were purchased by the export trade. Heavy orders were received from both Russian and German merchants in anticipation of the new tariff, which became operative in those countries on March 1, 1906. Five years ago, in Russia, the duty was \$45 per 110 gallons. Later this was raised 50 per cent, without any effects on the trade. The new tariff now raises it to \$250, to which must be added the costs of shipments and merchants' profits, which is bound to demoralize the trade in the wine business.

The United States increased its small consumption of Madeira wine almost 40 per cent over 1904.

SUGAR CANE.

The crop of sugar cane, which has constituted one of the chief industries of Madeira for several hundred years, was slightly in excess of 1904. This season again furnishes further demonstration of the efficacy of what is known as the "Hinton Daudet" process of refining sugar which was applied for cane by Hinton & Sons, of Funchal. By this process waste has been successfully reduced to a fractional minimum, all but 4 per cent of juice being extracted, as against 20 per cent under the old system of double crushing. Successful as this method is in the treatment of cane, the sugar industry here can only be carried on by a protective duty equal to 150 or 200 per cent *ad valorem*.

SPAIN.

YELLOW PINE MARKET.

COMPLAINTS CONCERNING SCARCITY AND CONTROL.

Consul-General Benj. Ridgely, of Barcelona, reports concerning the conditions of the yellow-pine market in Spain. He finds a good deal of grumbling going on among the dealers and people who purchase for building purposes. He writes:

Spanish lumber importers are complaining bitterly not only of the increased price of American yellow pine but of the scarcity of that product. They are also complaining that recent cargoes of yellow pine have been far below the standard in quality. It is stated and believed here that a lumber trust has been organized in the United States to put up prices of sawn timber for export; and it is difficult to convince importers that the rise in prices is only the natural result of supply and demand. Last year, they say, they could buy yellow pine f. o. b. in Florida ports for \$11 per 1,000 feet. This year the ruling price for the same product is \$23 and the better quality is scarce at that. As a consequence, in spite of our new commercial arrangement

with Spain, which lets American lumber in on the same basis as that of lumber coming from other most-favored nation countries, i. e. at 5 pesetas (96.5 cents) per cubic meter, instead of 6 pesetas (\$1.16) as heretofore, there has been and will be a great falling off in imports from our country.

YELLOW PINE IN FAVOR.

The only American building lumber for which there has been or may be a considerable demand here is yellow pine, which is used for the interior of office buildings, chalets, villas, and other structures where it is desired to preserve the natural color of the wood. This lumber began to find its way to Spanish markets some years ago when the red and white pine of the Baltic countries rose in price, and it is so well liked here that there would probably be a continuous and unlimited demand for it at prices ranging from \$19 to \$20 per 1,000 cubic feet f. o. b. in American ports, but, at present prices, lumber importers say they must limit if not virtually cease to import it. The red and white pine lumber of the Baltic, which is now very largely if not almost exclusively used here for building purposes, sells at \$54 c. i. f. Barcelona, per standard of 1,980 feet. American yellow pine, at present prices, would cost here \$69 per standard. These comparative figures are sufficient to explain why imports of lumber from the Baltic are increasing while those from the United States are falling off. I repeat, however, that, according to the information which I have been able to obtain on the subject, there would be a very large and continuous demand for our yellow pine at prices ranging from \$19 to \$20 per 1,000 cubic feet f. o. b. in American ports. But this must be for sawn lumber, of what is known as "merchantable" quality, and not for square-edged timber. It is unfortunate for our trade that two cargoes of very bad stuff were recently shipped to Valencia from Florida.

It is claimed that the American exporters sold the lumber in this instance upon the assurance that it was of good merchantable quality and were paid cash for the goods against shipping papers. Spain has virtually no lumber of her own. If we have yellow pine to sell this is one place to sell it, if the prices can be kept within bounds and the quality maintained.

FRANCE.

ROUBAIX STATISTICS.

INCREASING COMMERCE—WOOL TRADE.

Consul W. P. Atwell, in reporting the foreign trade of the consular district of Roubaix, France, shows that the volume of business, both imports and exports, is increasing at a very healthy rate, and demonstrates that the district ranks high commercially and industrially among the leading trade centers of the Republic. He writes:

The imports for 1905 amounted to \$156,894,113, against \$154,671,300 in 1904; exports were \$87,741,914, against \$73,483,107.

The imports, by principal articles, are shown in the following table:

Articles.	Value.	Articles.	Value.
Breadstuffs.....	\$10,342,200	Lead	\$1,032,201
Chemicals	1,630,000	Lumber	2,175,595
Coal.....	438,622	Manganese	1,182,199
Copper.....	2,677,208	Nitrate	6,435,200
Cotton, and tissues	10,792,020	Oil	1,939,186
Dyes	336,324	Oil cake	1,271,152
Fertilizers	272,481	Oil seed.....	10,662,000
Flax, and tissues	9,360,979	Paper and cardboard.....	802,199
Grease	891,540	Petroleum.....	1,410,386
Hair	343,765	Pottery	1,222,651
Hemp.....	1,766,723	Rice	1,923,000
Hides	2,066,381	Wool, waste and tissues.....	56,194,307
India rubber.....	692,520	Yarn of all kinds.....	1,707,200
Iron and steel, manufactures of:		Zinc	2,436,750
Machinery.....	2,489,601	All other articles	12,166,180
Tools.....	1,068,183		
All other.....	5,267,760	Total	156,894,118
Jute.....	3,907,600		

The principal exports were: Manufactures of wool, \$26,660,439; tools, \$4,398,635; hides, \$2,580,762; machinery, \$2,928,028; pottery, \$1,796,000; sugar, \$2,574,173; cotton and tissues, \$4,772,468, and chemicals, \$1,967,832.

The chief exports to the United States consisted of dress goods, valued at \$1,124,779; potash, \$139,508; wool, \$120,738; flax waste, \$83,345; grease, \$76,025; linen goods, \$45,411, and upholstered goods, \$408,021.

WOOL AND WOOLENS.

The wool market has been a rising one, the price of raw material having increased steadily since the beginning of the year. The minimum price paid for wool was 98.4 cents per 2.2 pounds in March, 1905, which rose to \$1.22 in May, 1906. Many manufacturers feared at the beginning of the season that goods made from coarse grades would go out of use on account of the high price of this class of wool. This fear has proved groundless, as crossbreds have been in great demand and have been sold at altogether unexpected prices.

The majority of wool combers have had only a moderate season. Spinners of combed wool have done better than during 1904, and spinners of fancy carded wool have been kept busy. Weavers of dress goods have had an extremely good season; in fact, not since 1895 has such activity prevailed. The increase in the production of dress goods is attributed to many more looms which have been fitted up with modern machinery. The present style of more loosely woven goods has also favored rapid production.

A large establishment for cleaning wool by a new process known as the "Yula process" is on the point of starting in this district. This process is dissimilar to any through which wool is usually passed, being mechanical instead of chemical. It is said that wool cleaned by the new process gives far better results in spinning than that treated by the old method. The most striking results thus far have been obtained in the treatment of carded waste, which is a mass of dirt and vegetable matter. The old treatment only cleansed the waste of a certain amount of dirt, after which it was then carbonized with sul-

phuric acid, and afterwards scoured thoroughly. The "Yula process" rids the waste of dirt and vegetable matter in one short operation, leaving a clean product fit for spinning.

The total amount of clearances through the conditioning houses of the Roubaix district for the fiscal year ended June 30, 1906, was as follows, in pounds:

Roubaix: Combed wool, 75,367,714; wool yarns, 19,238,500; waste wool, 5,852,460; cotton, 9,847,088; and silk, 171,734.

Tourcoing: Combed wool, 46,770,451; wool yarns, 13,239,181; waste wool, 23,469,921; cotton, 7,510,765; and silk, 9,447.

Tournies: Combed wool, 5,125,967; wool yarns, 11,832,002; and waste wool, 224,033.

Le Cateau: Combed wool, 177,076; wool yarns, 2,587,094; cotton, 9,772; and silk, 11,680.

The International Exposition at Tourcoing opened in April, but was not fully organized until July. The display of combing and weaving looms was most instructive to those interested in textiles.

American typewriters were on exhibition and are now in demand, as two offices for their sale have been opened in the main artery of the town.

FORRIGN COMMERCE.

EXCELLENT GROWTH THIS YEAR.

The statistics of the French customs department show that during the first seven months of the year the value of the imports into France was \$597,048,395, as compared with \$540,636,196 in the corresponding period of 1905, and of the exports \$551,311,062, as compared with \$516,597,117.

GREAT BRITAIN.

MARKET FOR WIRE SCREENS.

ENGLAND DEFENSELESS AGAINST FLIES AND MOSQUITOES.

Consul Albert Halstead writes from Birmingham that the people of England suffer great annoyance from flies, mosquitoes, and gnats, and that, despite this suffering, no adequate means for defense have been adopted. The Consul writes:

I have yet to see a house in England equipped with window and door screens, such as make life endurable in the United States in the summer months. There are, however, a very few mosquito bars, made of cotton netting, such as were so common in America a quarter of a century or so ago, and were later displaced by wire screens. While insects do not remain so long and are not so numerous as in the United States, it seems as if there should be a favorable opening here for the sale of wire screens and wire netting. The very general use in England of (French) windows that open outward is an obstacle to the introduction of wire screens, but one that could be overcome by having the screens inside the windows, as is not infrequent in the United States, or by having them open into the room as doors do.

The introduction of wire screens and wire netting into the United Kingdom would not be an easy task. No manufacturer of these articles could secure results by sending over circulars or catalogues, arranging with hardware dealers to "stock" his goods, or by casual attempts to secure trade. Quiet, earnest, and persistent work through trained agents would be necessary. Demonstrations of the advantages to follow, and skillful illustrations of the advantages and comfort of a house screened from insect pests, would be required. Advertising attractively worded would be a benefit. The education of the people to the really greater comfort and better health that would follow the use of the wire screens would perhaps be a slow and costly process, but a campaign properly conducted should in the end bring profitable results.

FAVORABLE CONDITIONS.

The present appears to be a favorable time for such a campaign, for British newspapers and physicians have called attention to the house fly as a most dangerous carrier of disease and to the mosquito as a distributor of malaria. Fly paper is generally used in kitchens and in some meat markets, but the sight of a kitchen filled with flies, or of flies feasting on meat exposed for sale in a butcher's shop, is not encouraging to the appetite nor calculated to assure one that he is not in danger of typhoid or other disease.

The manufacturer of wire screens or wire netting who would capture the British market must have a care that he offers only a screen that is actually rustless, for the dampness of the British climate at all times, except perhaps in July and August, is certain to rust any screen that is not absolutely rust proof. Such a result would be fatal in a country where durability is an imperative requirement in all articles.

VALUE OF TARRED ROADS.

Consul Halstead also forwards an English trade-journal article regarding the hygienic value of tarred roads. Road painting with tar is described as follows:

The road is first thoroughly cleaned by dry sweeping, then roughly-distilled tar is poured over it and spread evenly, after which sand is thrown on and the road is immediately ready for traffic. A fortnight or three weeks later a second coating is applied and in a short time the road has the appearance of an asphalt street. It appears, also, that a short stretch of road in Beckenham was treated with tar oil, which is poured over again until the pores of the road exude the preparation. This tar oil, however, dries up quickly, does not make an oily and nasty mess in wet weather and is said to be much cheaper than the tar process, but it requires more frequent renewal. A comparatively small quantity of the material is available, and this is a difficulty in the way of its general adoption. The Beckenham district council is spending about \$9,000 in laying down two short stretches with the most up-to-date tar macadam.

COMBINATION IN BRITISH HINGE TRADE.

"A combination has just been formed of the whole of the hinge makers of Great Britain," states the London Times, "with the view of

putting an end to the severe underselling which exists. A new price list has been issued and has received the assent of all the makers. It will place business upon a more remunerative level than it has been for a number of years. The headquarters of the new organization are at Birmingham."

GERMANY.

WIRELESS TELEGRAPHY.

EXPERIMENTAL USE ON RAILWAY TRAINS.

Consul E. L. Harris, of Chemnitz, writes that he has received numerous inquiries in regard to a short report made by him several months ago on the introduction of wireless telegraphy on railway trains in Germany, intended to lessen the danger of accidents. The information upon which the consul's report was based was taken from a Chemnitz newspaper. He says that no further information than was contained in his report could be obtained from the Saxon railway officials, and adds:

The last issue of the Berlin Woche contains an illustrated article which shows that experiments are being carried on quite extensively on the Berlin-Zossen line with results which are in favor of an early adoption of wireless systems on many of the State railways. I would advise those interested in securing detailed information concerning the progress of these experiments to address a letter of inquiry to Zimmerstrasse 37-41, Berlin, and it is not improbable that the writer may eventually be put in touch with the officials having charge of the matter.

INSURANCE COMPANIES.

REPORT OF IMPERIAL BUREAU OF INSPECTION.

Vice-Consul Charles Karminski, of Seville, reports concerning the work of insurance companies in Germany during 1905. According to his report, based upon one issued by the imperial bureau of inspection, control was exercised over 1,180 insurance ventures, 74 of which were foreign. He writes:

Of the home companies 381 were engaged in the life-insurance branch, with gross receipts of premiums totaling \$96,109,184; 44 guaranty companies, whose gross receipts amounted to \$12,914,698; 19 hail-insurance companies, realizing \$5,247,857; 536 cattle-insurance companies, with a total of \$2,828,564; 75 fire-insurance companies and insurances against burglary and damages of weather inclemencies and water, \$39,063,187, and 62 miscellaneous branches of insurance, whose gross receipts amounted to \$1,649,520.

Of the foreign companies 24 dedicating themselves to life insurance realized \$9,153,232; 9 guaranty and accident insurance companies, \$2,848,124; 46 fire-insurance companies and insurances against burglary and damages of weather inclemencies and water, \$5,572,386, and 9 miscellaneous branches of insurance, \$48,306.

Fully 7,000 vessels were insured by the 31 companies of ships' underwriters in the course of the year described, the total of premiums thereon amounting to \$10,898,020.

BAD TEETH.

EXAMINATION OF SCHOOL CHILDREN.

The result of an examination of the teeth of the pupils of a school at Hochheide, in Germany, reported by Consul-General Richard Guenther, of Frankfort, is very suggestive. Of the 1,020 children examined 482 were boys and 538 girls. The boys had 12,826 defective teeth and only 2,116 sound ones. Only 19 of the boys had perfectly sound sets of teeth, 397 sets were unfit for chewing food, with 192 boys disturbances in their general condition were observed, due to decayed teeth. Of the teeth of the girls 15,747 were found defective and only 931 sound. Only 16 girls had perfect sets of teeth; 205 girls were suffering in their general condition in consequence of decayed teeth.

The total result showed that 90 per cent of all the teeth examined were defective; only 35 out of 1,020 children had sound sets of teeth. In 396 children a poor bodily constitution was due to poor teeth. The result shows that caries, or decay of the teeth, has extremely noxious consequences.

SHOE MANUFACTURING.

THE TRADE FLOURISHING AND PROSPEROUS.

Consul Walter Schumann, of Mainz, writes about the shoe trade of the German Empire, which is reported to be flourishing and prosperous:

A newspaper describing the opening of the exhibition of machine-made boots and shoes held in the city of Cassel, reports that one of the speakers reminded his audience that the German boot and shoe industry was only 40 years old. In spite of its youthfulness, however, it is in a flourishing condition. The German Empire contains 1,600 boot and shoe factories, employing 60,000 workmen, who are earning between them the sum of \$12,000,000 per annum. Last year 60,000,000 pairs of boots and shoes were made in the Empire, whose total value was about \$75,000,000.

BELGIUM.

AMERICAN SHOES ABROAD.

LIMITED SUPPLIES THROUGH LONDON—UNFAIR TREATMENT IN BELGIUM.

Consul-General G. W. Roosevelt, of Brussels, after investigating the local markets in regard to its demand and supply of American shoes, came to the conclusion that better efforts ought to be made to meet the increasing demand. He writes:

In view of the fact that an immense trade is carried on in this city in ready-made shoes, I find that although they are in fair demand it is

next to an impossibility to buy a pair of fine first-class American ready-made shoes, men's or women's, in this city. Occasionally one's attention is attracted to a pair of shoes exhibited in some show window ticketed with a flamboyant small card bearing the American flag and legend "American shoes." When the possible buyer enters the store and requests to be fitted with a similar pair, he is most likely told that the shoes in the window are a model pair and for the moment the only pair in stock, but they have Belgian-made shoes in every respect a perfect counterpart of the American article. It may be remarked that the Belgian-made shoe strongly resembles in cut and style but lacks the finish of the American ready-made fine shoe. These imitation shoes are usually manufactured from native leather from American styles and on machines rented from parties in the United States.

AMERICAN SHOE STORE NEEDED.

In view of the growing popularity of the American style shoes for both men and women, as well as from information gathered from interested persons making inquiries at this consulate relative to this article of trade, I am persuaded that Brussels offers a most advantageous opening for an enterprising, up-to-date firm ambitious to capture the trade of this market. This can be done by establishing a well-appointed, up-to-date store and selling only first-class goods, as the average Belgian is a critical buyer, willing to pay a good price for first-class goods, and remains a constant customer once his confidence is gained. Consequently I see no reason why a store on the order here mentioned should not in a comparatively short time do a most thriving business and at the same time establish a well-merited reputation for our fine-grade shoes.

AMERICAN SHOES UNFAIRLY TREATED.

I am informed by shoe dealers here that most of the American shoes now sold on this market are bought through agents in London; that the goods are of a cheap grade and sold here at high prices, and in all cases at higher prices than a corresponding grade of Belgian-made shoes, thus creating for American shoes a reputation for high prices and poor quality, naturally putting an end to the consumer's confidence and custom. Leading wholesale and retail shoe dealers in Brussels agree as to this being a first-class market for American fine-grade shoes, provided the enterprise is introduced under attractive business methods. This could easily be accomplished by intending exporters, who could look the field over and familiarize themselves with the requirements of the market. An undeniable proof that American shoes are appreciated on this market for their perfect shape and fit is the fact that they have been copied and the imitations manufactured and sold here.

CHARACTER AND PRICES.

Belgian dealers claim that the class of American shoes sold here are not equal to the Belgian article, either in point of make or materials used. That one of the most serious complaints is against the soles, which are said to be made of a soft porous leather unsuited to this

damp climate. The average retail selling price of men's ready-made shoes is from \$4 to \$6.40 per pair, and it is claimed that the grade of men's shoes imported four years ago and retailed at \$2.50 per pair were of better quality than the \$3 to \$3.10 now imported. The leather used for men's shoes are box calf, vici kid, tan kid, Russia calf, willow calf, patent leather, kid, and patent calf. Patent leather is fairly well liked, though regarded as somewhat too brittle. Heels on men's shoes are always low, and on women's shoes usually about 1½-inches in height.

The English are the greatest competitors for the trade, and their shoes, especially men's, are made from American models and find a fairly ready sale here. The only other competitors are the French and Germans, the former sending fancy goods and Germany the cheapest grade. French and German prices average about the same for same class of goods. The method of payment is from thirty days to six months.

INCREASING COMMERCE.

THIS YEAR SHOWS GREAT PROGRESS.

According to statistics of special commerce of Belgium, just published and furnished by Consul-General Roosevelt, the following progress is exhibited:

During the first seven months of 1906 importations amounted to \$351,192,450, an increase of \$32,768,119, or 13 per cent, over the corresponding period of 1905. Exportations were \$266,423,396, an increase of \$37,497,970 above same period of 1905, or 16.4 per cent. Customs duties collected amounted to \$6,431,118, an increase of 5.7 per cent.

HUMAN CONGESTION IN BRUSSELS.

Mr. Roosevelt quotes an official report as showing the congestion of people in the tenements of Brussels:

The committee visited 654 tenement houses, distributed through 17 streets and 50 alleys. The places visited contained 2,095 rooms, 251 garrets, and 16 cellars, in which were lodged 1,087 families, numbering 4,636 persons. Two-thirds of the tenements were found totally deprived of open air and space. Other sanitary accommodations were of the poorest type. Families occupying one room vary from 1 to 10 persons, the average being 4. Notwithstanding the overcrowding, the houses were generally found to be kept clean and tidy. In several instances families were found to have been occupants of the same quarters for periods varying from fifty-one to seventy-six years. The monthly rent varied from \$2.12 to \$5.79.

NETHERLANDS.

STRAWBOARD MANUFACTURE.

PROFITS AND PRICES OF DUTCH MANUFACTURERS.

In transmitting the following report, Vice Consul-General Voorwinden, of Rotterdam, says that it is almost impossible to secure any reliable information from the manufacturers, who either refuse to give information or leave his communications to them unanswered.

Americans who have tried to purchase strawboard direct from the Dutch manufacturers, and who have come to the Netherlands for that purpose, have informed me of their failure to enter into direct trade, for the reason that the manufacturers have contracts with British houses for all they can turn out.

The profitableness of the strawboard manufacture in the Netherlands depends wholly upon the price of the straw, which ranges from \$4.80 to \$9.60 per metric ton (2,204 pounds), delivered at the factory. Last year the price ranged from \$7.20 to \$8 per ton, while the present price is \$8. The Dutch strawboard factories being operated by private parties or cooperative combinations, and not by limited companies, no dividends are published.

Neither the amount of strawboard produced nor the amount exported can be ascertained from the parties directly interested, as there are no official statistics from which the information might be secured. It is estimated that 200,000 tons of straw are consumed annually by the Dutch manufacturers, and as the strawboard produced amounts to 60 per cent of the raw material the whole output of the country may be estimated at about 120,000 tons per annum.

The export of strawboard from this consular district to the United States is insignificant, viz: \$512, \$1,977, and \$242 for the fiscal years ended June 30, 1904, 1905, and 1906, respectively.

[A list of the leading strawboard manufacturers in the Netherlands accompanied Mr. Voorwinden's report, which can be obtained from the Bureau of Manufactures by those interested in the matter.]

RUSSIA.

REVENUE OF EMPIRE.

REMARKABLE FIGURES—EXCEEDINGLY FAVORABLE.

Ambassador G. v. L. Meyer, of St. Petersburg, reports Russia's revenues for the first five months of 1906 at 837,700,000 roubles, against 783,200,000 for a like period in 1904 (rouble=51.5 cents). He writes:

The total receipts from the State railways for the first half of the year were 212,400,000 roubles, as compared with 211,400,000 roubles for the same period of 1905. In the State Savings Bank there were deposited in May, 1906, 17,000,000 roubles; June, 13,500,000 roubles; in May, 1905, 6,400,000 roubles; June, 7,700,000 roubles. The total amount paid out during the first six months of 1906 amounted to

128,000,000 roubles, as compared with 32,500,000 roubles during the same period last year.

The value of exports for the first six months of 1906 amounted to 486,435,000 roubles. The value of imports for the same period amounted to 284,487,000 roubles. In the corresponding period of 1905 the exports were 467,931,000 roubles; imports, 255,074,000 roubles. The figures for the first six months in 1906 are the largest for ten years.

The customs receipts for the first half of 1906 amounted to 114,805,000 roubles; first six months of 1905, 101,621,000 roubles; first six months of 1904, 110,686,000 roubles. The half year's customs receipts for 1906 exceed the budget estimate for that period by 15,860,000 roubles.

* RUSSIAN TRADING IN SIBERIAN FURS.

The St. Petersburg Journal of Trade and Industry draws attention to the activity of the Northeastern Siberian Company (Limited), which holds a concession of 100,000 square kilometers (over 62,000 square miles) and is at present operating on the Chukotskoi Peninsula. The syndicate, which apparently is regarded in some quarters in Russia as a menace to Russian industrial interests, is described as encouraging the prospecting for gold by Americans and as carrying on considerable trade with the native inhabitants by exchanging alcohol and tobacco for furs and other commodities. Its exports from the peninsula in 1905 are said to have included 9,850 sealskins, 8,200 walrus tusks, 8,000 pounds of whalebone, 1,000 reindeer skins, and 600 white fox skins, as well as skins of white and black bear, otter, sable, and other animals. The profits on these transactions is said to be very large, the price of whalebone, for instance, being only half that along the Alaskan coast.

AUSTRIA.

MODERN BOHEMIA.

A GREAT INDUSTRIAL COUNTRY—INTENSE AGRICULTURE.

Consul Urbain Ledoux, of Prague, calls attention to the Bohemia of real life as an entirely different sort of a place from the Bohemia of romance. He thinks there has been a disposition on the part of a great many people to regard the country as a romance land simply, to refer to it as such, thus neglecting the splendid trading opportunities offered by it to enterprising merchants and to manufacturers of many kinds of modern time and labor saving machinery. Mr. Ledoux writes:

Bohemia is situated in the very heart of Europe, on the highway of commerce between its northern and southern ports and eastern and western markets, a day's distance from the former ports and only a few hours from the principal cities of central Europe.

Bohemia is a land of extraordinary industrial activity, great agricultural wealth, considerable financial resources, and vast commercial possibilities; and the land contains one of the most industrious and

highly educated people of the Old Continent, where all branches of education are far advanced.

Bohemia has a population of 6,318,697, or about 25 per cent of the total population of Austria—26,150,708. This population is about 65 per cent Czech and 35 per cent German.

There is considerable rivalry between the two races, and this should be taken into consideration in dealing with them. The commercial men speak both languages, but generally prefer to be addressed in their own tongue, and, frequently, to deal with their own nationality. Of the foreign languages spoken, French seems the most popular with the Czechs and English with the Germans, but the younger generation is learning both languages, thus speaking four languages—German, Czech, English, and French.

EXTENT AND INDUSTRIAL CONDITION.

Bohemia covers an area of 20,061 square miles, or about 18 per cent of the total area of Austria. The climate is about the same as that of New York. Of the 17 divisions of the Austrian Empire the Kingdom of Bohemia ranks second in area but first in industry and commerce. It is also claimed that its land is very fertile and its people industrious. Of the population about 40 per cent are engaged in farming and forestry, about 38 per cent are employed in manufacturing and mining, 8 per cent in commerce, railroading, etc., and 9 per cent as laborers. Only about 4 per cent of the land is not under cultivation. About one-third of the industrial or commercial firms in Austria are established in Bohemia, representing about 37 per cent of the total Austrian industrial and mining interests and about 26 per cent of its whole commerce. It may be added that Bohemia's contribution to the imperial revenue averages about 25 per cent of the total amount of State taxes received. On taxes levied on real property (land, houses, etc.) the proportion is 22 per cent and in personal income taxes 23 per cent. In indirect taxes levied on beer, alcohol, sugar, wine, tobacco, and mineral oil the proportion was about 27 per cent, giving a fair idea of the industry, wealth, and consuming power of the population of the Kingdom.

SWITZERLAND.

THE FOREIGN TRADE.

LAST YEAR EXHIBITS GREAT COMMERCIAL ADVANCES.

According to a report furnished by Consul H. H. Morgan, of Lucerne, the foreign trade of Switzerland for the calendar year 1905 was as follows:

Imports \$266,311,363 and exports \$187,080,470, an increase of \$26,977,633 in imports and an increased export of \$15,024,966 over 1904. Notable increases are made in the imports of wood, spirits and malt liquors, leather and shoes, and manufactures of iron and steel. In exports large increases are noted in watches and clocks,

machines and vehicles, cheese, and manufactured articles of silk and cotton.

The principal articles of import were: Iron and steel manufactures, \$15,449,405; food stuffs and tobacco, \$60,586,726; silk, \$29,787,478; cotton, \$18,763,696; mineral matter, \$17,550,142; wool, \$13,977,478; animals, \$11,588,915; spirits, etc., \$11,092,978; chemicals, \$6,070,359; machines and vehicles, \$8,961,955; precious metals, \$10,017,238, and leather and shoes, \$7,458,077.

The principal exports were: Watches and clocks, \$23,828,958; food stuffs and tobacco, \$24,732,091; manufactures of cotton, \$35,867,277; manufactures of silk, \$48,390,515; machines and vehicles, \$11,811,913; aniline colors, \$3,962,622; wool, \$4,496,407; straw, \$2,257,597; animals, \$2,894,057, and millinery, \$2,609,060.

MONTENEGRO.

WARNING TO AMERICAN TOURISTS.

Consul George M. Hotschick, of Trieste, furnished information for tourists contemplating a visit to Montenegro, which will be especially interesting to those who travel with kodaks and firearms. He writes:

As many tourists from the United States usually travel along the Dalmatian coast when the hot season has past, and frequently visit Montenegro, I think it advisable to warn American tourists to be cautious when entering Montenegro for the following reason: The secretary of war of Montenegro has issued an order which establishes a very stringent observance about carrying weapons of any kind and using kodaks. In future no aliens, single or in groups, carrying weapons will be allowed to travel in the principality without danger of being arrested by the local authorities and transported to Cetinje. Foreigners carrying kodaks without a written permission will be prosecuted, even if they take only snap shots of the scenery. This order has been issued for military reasons.

ICELAND.

DIRECT TRADE SOUGHT WITH AMERICA.

Telegrams to Copenhagen from Reykjavik, Iceland, intimate that the Icelanders are planning to bring about direct importation of American goods instead of by way of British ports, as heretofore. The imports from America, especially petroleum, wheat, sugar, and tobacco, have largely increased during recent years, and it is thought the trade could be considerably improved with cheaper direct transportation.

The legislature of Iceland has decided to invite 40 members of the Danish Parliament to accompany the King of Denmark on his projected visit to Iceland in the summer of 1907.

FAR EAST.

CHINA.

COMMERCIAL TREATY PORTS.

SITUATION, WHEN AND HOW OPENED TO COMMERCE.

Mr. Charles Denby, chief clerk of the Department of State, has prepared a list of the treaty ports of China, giving their situation and date and manner of opening. The data are taken from information obtained from the Chinese customs service. Mr. Denby was for many years actively connected with the diplomatic and consular service in China, and is well informed regarding commercial matters in that country. In addition to the list of treaty ports Mr. Denby has furnished a list of abbreviations of the names of Chinese provinces.

Name of port.	Situation.	Date of opening of imperial maritime customs.	How opened.
Amoy.....	Fukien Province.....	1862	British treaty of Nanking, 1842.
Canton.....	Kwangtung Province.....	1859	Do.
Changsha.....	Hunan Province (on the Slang River).	1904	Japanese treaty of 1903.
Chefoo.....	Shantung Province.....	1862	British treaty of Tientsin, 1858.
Chinkiang.....	Kiangsu Province (on the Yangtze).	1861	Do.
Chinwangtao (mart) ..	Chihli Province.....	1901	Edict of 1898.
Chungking.....	Szechwan Province (on the upper Yangtze).	1891	Chungking agreement (British) of 1890.
Foochow.....	Fukien Province.....	1861	British treaty of Nanking, 1842.
Hangchow.....	Chekiang Province.....	1896	Treaty of Shimonoseki, 1895.
Hankow.....	Hupei Province (on the Yangtze).	1862	British treaty of Tientsin, 1858. German treaty of 1861.
Ichang.....	do.....	1877	Chefoo agreement (British) of 1876.
Kiukiang.....	Kiangsi Province (on the Yangtze).	1862	Yangtze trade regulations, 1861. German treaty of 1861.
Kiangchow.....	Island of Hainan (Kwangtung Province).	1876	British treaty of Tientsin, 1858.
Kongmoon.....	Kwangtung Province (on the West River).	1904	Mackay treaty (British), 1902.
Lungchow.....	Kwangsi Province.....	1899	French "Lettre additionelle" 1887 and Gérard convention, 1895.
Mengtsu.....	Yunnan Province.....	1899	Do.
Nanking.....	Kiangsu Province (on the Yangtze).	1899	French treaty of 1858.
Newchwang (also Yingkow, or Yingtze).	Shengking Province (at the mouth of Liao River).	1864	British treaty of Tientsin, 1858.
Ningpo.....	Chekiang Province.....	1861	British treaty of Nanking, 1842.
Pakhoi.....	Kwangtung Province.....	1877	Chefoo agreement (British) of 1876.
Samshui.....	Kwangtung Province (on the West River).	1897	British Burmah convention of 1897.
Santuaio (Mart).....	Fukien Province.....	1899	Edict of 1898.
Shanghai.....	Kiangsu Province (at the mouth of the Yangtze).	1854	British treaty at Nanking, 1842.

Name of port.	Situation.	Date of opening of imperial maritime customs.	How opened.
Shasi	Hupei Province (on the Yangtze).	1896	Treaty of Shimonoseki, 1895.
Soochow	Kiangsu Province	1896	Do.
Swatow	Kwangtung Province	1860	British treaty of Tientsin, 1858.
Szemaao	Yunnan Province	1897	Gérard convention of 1896.
Tengyueh	do	1902	British Burmah convention of 1897.
Tientsin	Chihli Province (on the Pei-ho).	1861	British convention of 1860.
Wenchow	Chekiang Province	1877	Chefoo agreement (British) of 1876.
Wuchow	Kwangsi Province (on the West River).	1897	British Burmah convention of 1897.
Wuhu	Anhui Province (on the Yangtze).	1877	Chefoo agreement (British) of 1876.
Yatung	Tibet	1894	Sikkim convention, 1890.
Yochow (Mart)	Hunan Province (at the mouth of Tungting Lake.)	1890	Edict of 1898.

Imperial maritime customs offices have also been established at Tsingtau (Kiaochow customs), Hongkong (Kowloon customs), and Macão (Lappa customs).

ABBREVIATIONS OF NAMES OF PROVINCES.

The abbreviated names of the several provinces are as follows:

Anhui	An.	Kweichow	Kwei.
Chekiang	Che.	Manchuria	Man.
Chihli	Chi.	Shengking	King.
Fukien	Fu.	Kirin	Kir.
Honan	Ho.	Heilungkiang	Hei.
Hunan	Hun.	Shansi	Sha.
Hupei	Hup.	Shantung	Sht.
Kansu	Kan.	Shensi	She.
Kiangsi	Ki.	Sinkiang	Sin.
Kiangsu	Ku.	Szechwan	Sze.
Kwangsi	Si.	Yunnan	Yun.
Kwangtung	Tung.		

SIAM.

THE OPEN DOOR.

GERMANY PUSHING COMMERCIAL INTERESTS IN THE ASIATIC EMPIRE.

Consul Ernest L. Harris, of Chemnitz, advises that, according to reports from German business men resident in Siam, that country is not only well governed, but from year to year is presenting ever-increasing opportunities for the sale of manufactured goods.

During the past ten years such progress has been made in organizing the internal machinery of the State that foreigners may now safely and with some show of profit invest capital in the country without running the risks which had to be taken into consideration in former years. Siam has inaugurated the policy of the open door, and all foreigners are given an equal chance in participating in the commercial and industrial development of the country.

The commerce of Siam at present is about equally divided between English and German merchants. Steamship lines of both nations call at Bangkok, and many officials of both nationalities are employed by the short railway and telegraph lines. The recent increase in the number of vessels in the service between Germany and the Far East would indicate that German merchants are determined to hold their own against the ever-increasing pressure of not only English, but especially Japanese, competition. Siam offers a field for railway supplies, road-making machines, and farm implements, as well as textile manufactured goods, and the Germans are prepared to make the most of it.

AUSTRALIA.

GOVERNMENT BOUNTIES.

EXTENSIVE PLAN TO AID INDUSTRIAL ENTERPRISE.

Consul-General John P. Bray reports from Melbourne that a bill has been introduced in the Australian Parliament which provides for the sum of \$243,325 per annum for a period of ten years from July 1, 1906, to be paid in bounties on the production of certain goods.

These bounties are to be payable on goods of a marketable quality and which have been produced by white labor only, and at the standard rate of wages in the district in which they are produced. The following is the schedule:

Cocoa.—Bounty period, nine years; rate of bounty, 2 cents per pound on dried beans; maximum amount for any one year, \$4,866.50.

Coffee and chicory.—Bounty period, eight years; rate of bounty, 2 cents per pound; maximum amount for any one year, \$12,166.25.

Cotton.—Bounty period, five years; rate of bounty, 10 per cent on market value; maximum amount for any one year, \$21,899.25.

Fibers (flax, ramie, sisal hemp, hemp, New Zealand flax, pandanus, and such other fibers as are prescribed).—Bounty period, ten years; rate of bounty, 10 per cent on market value; maximum for any one year, \$29,199.

Fish (canned or tinned).—Bounty period, five years; rate of bounty, 1 cent per pound; maximum for any one year, \$53,531.

Milk (sweetened, condensed).—Bounty period, five years; rate of bounty, $\frac{1}{2}$ cent per pound; maximum for any one year, \$24,332.50.

Milk (powdered).—Bounty period, five years; rate of bounty, $1\frac{1}{2}$ cents per pound; maximum for any one year, \$24,332.50.

Oils (olive, china, linseed, castor, colza, sunflower, essential, cotton-seed, and such other oils as are prescribed).—Bounty period, ten years; rate of bounty, 10 per cent on market value; maximum for any one year, \$31,632.25.

Rice.—Bounty period, five years; rate of bounty, \$4.86 per ton; maximum in any one year, \$7,299.75.

Miscellaneous (rubber, kapok, and such other goods as are prescribed).—Bounty period, ten years; rate of bounty to be prescribed by regulation; maximum in any one year, \$34,065.50.

NEW SOUTH WALES.

MARKET FOR AMERICAN GOODS.

Consul O. H. Baker, of Sydney, writes that there is a market in New South Wales for American goods. He says:

Splendid opportunities are offered for trade in hardware, machinery, crude drugs, foods, agricultural implements, paper, glass, canned

goods, and many other articles. The introduction of American goods depends very largely on satisfying the merchants that there will not be a rapid change in prices, and that no delays will occur in shipping orders. The usual custom is for the merchant to buy at ninety days sight draft, sometimes with letter of credit attached. There is a general complaint regarding the packing of American goods shipped to New South Wales. Manufacturers, who, from experience have learned that goods packed in light boxes have been broken in shipment, are now using heavier cases, braced on the inside and outside.

The Australian merchant objects to the general carelessness of the American manufacturer in the matter of postage. A great number of catalogues are destroyed each mail by the postal authorities because postage had not been fully prepaid, the addressee refusing to take them out. Letters can not be answered in less than eight weeks; therefore American merchants must take care to anticipate possibilities and not wait for little points to arise which would necessitate further correspondence that would require two or three months' time.

NORFOLK ISLAND.

COMMERCE OF THE COLONY.

Consular Agent Isaac Robinson, in reporting on the commerce of Norfolk Island, says:

With the exception of kerosene, of which about 500 cases are consumed yearly, there is little opening for the sale of American goods, although a few plows and lawn mowers are in use. As the island only contains about 9,000 acres and has a population of 815, there is no extensive sale for machinery or other goods.

The leading industry, whaling, was not very successful the past season as only 8 whales were taken, yielding 24 tuns of oil.

The imports for 1905 were valued at \$42,125; exports, \$10,059. The imports were from New South Wales (\$35,492), New Zealand (\$6,196), and the South Sea Islands (\$437). Of the exports \$8,495 went to New South Wales, \$466 to New Zealand, and \$1,098 to New Caledonia.

AGRICULTURAL MACHINERY.

DUTIES IMPOSED THROUGH IMPORTS, NECESSARY.

Australia does not appear to take a wise course in levying duties on all agricultural machinery and increasing the duties previously imposed. That country does not produce the machinery required to promote the development of the country, and the imposition of duties on necessary machinery seems to be a poor method of procedure.

MACHINERY AND METALS.

WORLD'S PRODUCTION AND NEEDS.

MACHINE TRADE COMPETITION.

DIVISION OF FOREIGN TRADE BETWEEN UNITED STATES AND GREAT BRITAIN—EACH COUNTRY HAS ITS STRONGHOLD.

The two great machinery-producing countries of the world are the United States and the United Kingdom. The American leadership has been in new and skillful mechanisms to save labor costs, the British in bulk of production and export. Both countries are rapidly increasing their foreign sales, as the following tables of comparison indicate, the American statistics being for the fiscal year ending June 30, 1906, which show 18½ per cent increase over 1904, while the British figures of export for the first six months of 1906, show 24½ per cent increase over the same months of 1904.

American exports, fiscal years ending June 30.

	1904.	1906.		1904.	1906.
Cash registers	\$1,836,233	\$2,496,891	Boilers and engine parts.	\$2,169,753	\$2,484,003
Electrical machinery	5,645,809	7,869,137	Stationary engines	1,069,401	1,485,093
Laundry machinery.....	553,912	674,398	Woodworking machines.	738,609	945,832
Metal-working machin- ery	3,716,709	6,445,612	Typewriting machines...	4,537,125	5,126,374
Printing presses	1,396,746	1,577,061	Agricultural machinery and implements	22,749,700	24,554,427
Pumping machinery	2,703,397	4,210,624	Other machinery	19,906,662	28,437,235
Sewing machines	5,623,423	7,272,868			
Shoe machinery	1,071,090	1,487,140	Total.....	78,979,981	93,448,397
Locomotives.....	5,261,422	6,375,229			

British exports first six months of year.

Classes.	1904.	1906.	Classes.	1904.	1906.
Locomotives.....	\$4,511,480	\$6,418,570	Textile machinery.....	\$11,627,723	\$15,339,841
Agricultural engines	2,499,887	2,782,545	Electrical machinery	1,045,587	2,132,797
Other engines	5,452,889	9,068,169	Other machinery	14,656,604	20,641,474
Agricultural machinery..	2,582,068	2,904,891			
Sewing machines.....	5,615,065	3,790,838	Total.....	52,129,317	64,836,326
Mining machinery	2,138,014	1,757,201			

Great Britain does not compete with America in the trade for cash registers and typewriting machines, laundry, shoe, and pumping machinery. In other lines competition between the two countries is keen. The United States exports of locomotives increased by 20 per cent from 1904 to 1906, while British exports increased 35 per cent.

The most notable American increase was in the Central American States, where \$37,150 worth of locomotives were sent in 1904, \$60,810 in 1905, and \$1,131,930 in 1906, while sales to Japan increased from \$624,873 in 1904, \$1,276,045 in 1905, and \$1,996,398 in 1906.

A THIRTY-FIVE MILLION DOLLAR ENGINE TRADE.

South American markets proved the best field for British locomotive expansion, the sales there increasing from \$785,000 for the first half of 1904 to \$3,180,000 for the first half of 1906, being 50 per cent of Great Britain's sales of locomotives this year up to June 30. British India was the next best customer, taking \$2,200,000 worth of British railway engines from January to July.

In agricultural engines the United Kingdom holds the heavy end of the foreign trade, and in other engines is strengthening her sales position. The exports amounted to \$9,068,169 for the first half of this year, against \$5,452,889 in the same period of 1904, and the indications are that the calendar year 1906 will exhibit a total British foreign engine trade of over \$35,000,000. The South American sales of British stationary engines advanced from \$500,000 in the first half of 1904 to \$1,200,000 for the first half of 1906.

SUPREMACY OF UNITED STATES IN FARMING MACHINERY.

American manufacturers of agricultural machinery and tools are daily strengthening their position abroad. Foreign sales in the fiscal year 1906 of mowers and reapers were \$12,150,101; of plows and cultivators, \$4,128,331, and of other implements, \$8,275,995. Argentina proved the largest market, taking \$5,963,714 worth of farm machinery, against \$3,996,476 in 1904. Russia purchased \$3,851,455 worth of American farm machinery in 1906, while France, Germany, and Canada each made purchases of over \$2,000,000. Holland trebled her 1904 purchases, making the amount over \$600,000 in 1906. Mexico doubled hers, with nearly a like amount.

The Philippines are beginning to be a factor in this trade, having bought \$115,800 worth of farming implements from the States for 1906, against \$25,000 a year for the two previous years.

Great Britain is making increasing sales of agricultural machinery in South America, the aggregate for the first six months of 1906 having been \$435,000, against \$235,000 for the same period of 1904. European sales also increased in this period from \$1,790,000 to \$2,085,000.

THE LAND OF ELECTRICAL PRODUCTIONS.

In electrical machinery America has a long leadership through the highest type of motor and other electric appliances. The domestic sale of these is enormous, but the surplus for foreign markets went up from \$5,645,809 in the fiscal year 1904 to \$7,869,137, fiscal year 1906. Canada proved the best customer, taking last year \$2,138,134 worth, and the United Kingdom \$1,153,528 values. Cuba, which purchased only \$31,786 worth of American electrical machinery in 1904, last year took \$528,565 worth. The exports to Japan, amounting to \$726,492 for 1906, was somewhat less than for the two previous years. But that Great Britain was not idle in the electrical field is shown by the doub-

ling of exports in this machinery in comparing the first half of 1906 with the same period of 1904.

CHANGING SEWING-MACHINE TRADE.

The sewing-machine trade of Great Britain showed a marked decline this year, exports for the first six months aggregating only \$3,790,838, against \$5,615,015 for the first half of 1904 and \$5,875,559 in 1905. It remains to be seen whether this loss is only temporary. The retrograde movement occurred entirely in Europe, where the loss from the previous periods was about \$2,000,000. Small gains were made, however, to nearly all other countries to which Great Britain sold sewing machines, especially South America.

The American sewing-machine trade, on the other hand, was a remarkable one for the fiscal year 1906, totaling \$7,272,868, against \$5,623,423 two years previous. Great Britain took \$1,692,739 in 1906, no doubt much of it for reexport, and Germany for the first time went over \$1,000,000 in purchases of American sewing machines. Argentina bought \$714,704 worth, and Mexico was the fourth largest market, taking \$696,543 worth, Holland \$470,927, and Australasia \$453,071.

LINES OF LEADERSHIP.

Great Britain rapidly continues to gain, in general, in the export of machinery, her two foremost leaders, that of power equipments and textile manufacturing apparatus, being in general demand. These two grand classes compose one-half of her machinery exports.

America's skilled artisans and inventors keep this country in the forefront in electrical commodities, farming implements, sewing and typewriting machines, and machine-shop equipment. The export growth in these lines, as well as others in which the United States is growing prominent, may be expected to continue the present rate of progress in accordance with their excellent reputation abroad.

JAPAN'S PURCHASES.

REMARKABLE GROWTH OF MACHINERY IMPORTS.

One of the rising countries in the purchase of machinery is Japan, the amount last year exceeding \$6,000,000. A study of the Japanese Year Book, just issued from Tokyo, reveals a remarkable growth in the importation of this line of mechanical productions, the following of which is especially interesting:

Previous to 1896 Japan purchased no electric motors, and in that year only \$7,000 worth, and not until 1900 was the \$100,000 mark passed. The importation in the calendar year 1905 aggregated \$1,227,700, of which two-thirds came from the United States. Only \$100,000 of locomotive engines were purchased by Japan in 1892, but for 1897 and 1898 the importations were over \$2,000,000 for each year. In 1899 the importations fell to \$984,000, but for the past three years has always exceeded \$1,000,000. The American and German locomotives are now gaining supremacy in Japan, where the British make formerly led. For six years previous to 1905 the sale of British

locomotives averaged half a million dollars per annum in Japan, but last year they dropped to less than \$150,000. The following table shows the Japanese importation of motors and locomotives for the last two years:

Country.	Electric motors.		Locomotive engines.	
	1904.	1905.	1904.	1905.
United States	\$406,000	\$929,800	\$177,000	\$471,000
Great Britain	114,000	211,800	847,600	147,700
Germany	111,000	83,100	117,300	609,600
Other countries	2,000	3,000	3,700	4,900
Total	633,000	1,227,700	1,145,600	1,233,200

[These figures do not coincide with American declared exports, which show much higher values.]

POWER EQUIPMENT, TEXTILE MACHINERY, AND LATHES.

Steam boilers and engines from abroad came into Japan in 1892 to the extent of only \$90,000, but the increase has been steady, last year marking the first step over the million-dollar line. The sales of American boilers and engines to Japan more than doubled the 1904 figures. In textile machinery the United Kingdom supplies the major portion of Japan's needs, as she does to other nations of the world. The United States, however, is beginning to export this class of goods and sold to Japan last year \$14,600 worth of spinning machinery. Japan's heaviest purchases of textile manufacturing equipment were in 1897, when \$2,700,000 was thus spent abroad. The year 1892 marked the beginning of this trade by foreign purchase of \$178,000 worth of spinning machinery. The importation of raw cotton that year was only one-tenth the amount in 1905.

The introduction of turning lathes in Japan began in 1896 with \$36,000 expenditure. This went up to \$413,800 in 1904, nearly half the purchases being made in the United States. Great Britain and Germany then went after this trade, and succeeded in 1905 in selling lathes to Japan \$591,800 and \$126,800 of value, respectively. America, however, held her own, trebling the sales of the year previous. The Japanese importation of spinning machinery, steam boilers and engines, and turning lathes for the past two years was as follows:

Country.	Spinning machinery.		Steam boilers and engines.		Turning lathes.	
	1904.	1905.	1904.	1905.	1904.	1905.
United States	\$9,400	\$14,600	\$214,900	\$447,000	\$290,400	\$951,400
Great Britain	376,000	641,300	626,300	821,900	77,600	591,800
Germany	12,800	48,300	8,300	27,900	37,600	126,800
France	11,000	5,000	4,200	10,800	8,200	4,500
Other countries	5,900	400	1,700	8,900	.....	300
Total	415,100	709,600	855,400	1,316,500	413,800	1,674,800

This includes all the machinery imports given by the yearbook, minor articles not being stated. The great strides of Japan in the manufacturing world are evident when it is considered that in 1892 the machinery imports amounted to only \$367,500; in 1900 they were \$1,606,200; in 1904, \$3,462,900; and in 1905, \$6,161,800. Of this large

trade last year America secured nearly 40 per cent, Great Britain following closely with nearly 32 per cent.

FARM MACHINERY NEEDED.

REFORM OF INDIAN WHEAT GROWING AND HANDLING IN SIGHT.

Consul-General William H. Michael, writing from Calcutta, says that the dirty condition of Indian wheat has been the source of a vigorous complaint from Liverpool importers and the millers of London.

They are anxious to effect a contract with Indian producers and exporters that will secure cleaner wheat from India. The condition in which wheat is shipped from Karachi and other India ports is notoriously bad, and it is alleged by those who claim to know that it is growing worse. The dirty wheat involves unnecessary expense in handling and in freight charges on dirt. In addition to this the elevators at Manchester and other points will not receive Indian wheat and mix it with other wheat lest the weevils and dirt with which it abounds should deteriorate the clean wheat from America, Russia, and Argentina.

The agitation that this condition of things has caused is not without its effect on the Indian government, which is casting about for means of reform. The solution of the problem might be easily worked out with American thrashers and cleaners. The crudest methods for thrashing and cleaning wheat obtain in India. The flail and tramping processes, long since discontinued in almost every wheat-producing country, are still adhered to in India.

OPPORTUNITY FOR AMERICAN MACHINES.

The manufacturers and exporters of thrashing machines and cleaners might find it profitable to send thoroughly competent and wide-awake agents into the central provinces, northwest provinces, Bombay, Madras, Hyderabad, Mysore, and Kashmir, and perhaps other districts, for the purpose of introducing and encouraging the use of the latest improved thrashing and cleaning machinery and implements.

The output of wheat in India could be doubled and trebled by the introduction of American plows and cultivators, and wheat sowers and drilling machines. Deep plowing is needed in India instead of the "tickling of the surface" with the crude plows now so extensively in use. The soil should be plowed deep, and then rolled to bring the moisture to the top when needed by the roots of the grain.

As a matter of fact there is a vast field in India for American agricultural machinery from the plow to thrasher and cleaner. But to overcome antiquated methods and deep-seated prejudices, which will be necessary before the millions of wheat growers in India will "go in" for improved agricultural machinery, will take time and "Yankee patience."

One large model farm in each district where good soil exists, managed by a thoroughly competent American farmer, run on the plan of successful American farms, would do more to educate Indian farmers than any other method. The use of American machinery on such a farm or plantation would demonstrate to the Indian farmer the benefits in rupees that would surely accrue to him if he should adopt the same methods.

CHINA.

PUMPING MACHINERY STATUS.

Consul-General Jas. L. Rodgers supplies information from Shanghai as to the market in China for pumping machinery, as follows:

While the demand for steam pumps and hydraulic machinery is not now much in evidence, it will probably develop slowly along with other lines, the Chinese of late having exhibited great interest in all classes of machinery. However, with cheap labor and the peculiar and crude but very effective Chinese pumps, it may be expected that the use of such modern devices for a long time will be confined almost exclusively to cities. The water wheel, turned by the buffalo, can hardly be supplanted for irrigation work, and it is hard to imagine any other use to which a steam pump could be put in the country districts under the present economy of the people.

OUTLOOK FOR MACHINE TOOLS.

Responding to an inquiry from a manufacturer of high grade tools for iron working, Consul-General Wm. Martin writes, from Hankow:

Goods in your line have been in small demand in the past, but China is stirring itself. Mining is being carried on as never before. A great steel plant is in operation in this city, from which pig iron has been shipped to Mexico, and quantities are being shipped to Japan constantly. The company is arranging to complete the plant, so that it will be capable in the future of turning out 1,000 tons of steel per day. In a few years, with the aid of the railways, China will become a very large market for machine tools of all kinds.

It is a waste of money to send catalogues to China in English. Manufacturers will not buy in that way. It is the man on the ground who gets the business. The Chinese are a suspicious people and must see the goods. Germany now has many men busy laying foundations for future trade, and the Japanese, as well as the British, are very active. Some American firms have representatives in the field. To establish your business in China you must have at least one good man on the ground and must not be in too great a hurry for returns. In the end China will be a vast field for the exploitation of foreign tools and goods of all kinds.

SOUTH AFRICA

DAIRY EQUIPMENTS IN DEMAND.

Consul Albert Halstead, of Birmingham, sends a clipping from the South African Hardware Chronicle in regard to dairy machinery in that country.

The opening for dairy machinery in South Africa now and in the near future is and will be immense, for the great pastoral possibilities existing in all the colonies are, it is stated, on the eve of more effectual working than they have ever been, owing to the favorable influences—Governmental, economic, and climatic—now prevalent. The cooperative movement which the Cape Government is setting on foot is one among several influences stimulative in a high degree to this industry and other agricultural pursuits.

Consul Halstead adds: The manufacturers of dairy machinery who are most enterprising in preparing for the pastoral development of South Africa should be able to obtain a market that will continue to grow in value.

LOWER MACHINERY RATES TO MADAGASCAR.

According to Consul William H. Hunt, the agent of the Compagnie Havraise Steamship Company at Tamatave has informed the governor-general of Madagascar that his company has consented to accept as freight on agricultural machinery, particularly rice-hulling machines, provided that no single package exceeds $1\frac{1}{2}$ tons weight, the reduced rate of 35 francs (\$6.75) plus 10 per cent per cubic meter, or 45 francs (\$8.68), per 1,000 kilograms (or long ton), according to the choice and convenience of the vessel.

These rates apply to freight shipped from Havre, St. Nazaire, Pauilhac, and Marseille for Majunga, Diego Suarez, and Tamatave. The company has, moreover, under consideration a reduction of freight rates on the arachis or peanuts shipped from Madagascar to France, and will publish shortly the amount of the reduction it will be able to allow exporters of this product.

SYRIA.

USE OF AGRICULTURAL MACHINERY.

Mr. William C. Magelssen, vice consul-general at Beirut, in response to inquiries from the United States regarding the use of modern agricultural implements in Syria, writes:

Modern agricultural machinery has not been able to make much headway in Syria. The American colonists at Haifa have imported a number of American plows, drills, and binders. These work well in the Phœnician plains of that neighborhood. Two firms (names will be furnished by the Bureau of Manufactures) have introduced a small number of farm implements at Beirut, which have been distributed in this section and have given satisfaction. In the great agricultural regions of the Hauran plateau and the plains of Bukala and Hama very few modern machines are used, and the tillers of the soil employ implements which are few in variety and of the most primitive description. The country is, however, being opened up. Carriage roads are being built in all directions. Railways are being constructed and modern influences are at work everywhere. I have no doubt that there will soon be a popular demand for modern agricultural machinery.

MINING PROGRESS.

BRAZIL.

GOVERNMENT REQUIREMENTS FOR COMPANIES AND CONCESSIONS.

In response to a large number of inquiries as to the requirements of the Government of Brazil in the matter of concessions for mining and the organization of mining companies generally, Consul-General G. E. Anderson has secured from a Rio de Janeiro attorney a statement in

that regard, showing what must be done by foreign companies before they can do business in Brazil. These requirements are as follows:

(1) Foreign companies, in order to do business in Brazil and obtain authorization therefor from the Government to work in the country, must present a copy of their statutes, signed by the incorporators of the company.

(2) There must also be presented a list of the shareholders with their names, professions, residences, and the number of shares each subscribes; a power of attorney, made out by the directors or incorporators of a company, naming a representative in Brazil with powers to represent them before the Government, law courts, or with private individuals. In this power of attorney power must be given the said representative to sign a petition requesting the Government to authorize the company to work in Brazil and all other acts necessary for the purpose.

(3) Before foreign companies, established for the purpose of working in Brazil, begin operations they must deposit in the federal treasury a tenth part of their capital; this deposit can be recovered by the company immediately after its statutes have been deposited in the archives of the "Commercial Junta." For registering in the Commercial Junta, companies will pay a stamp tax of 1\$100 Brazilian currency for each 1,000\$000, which at present exchange equals about \$335 American gold, of the capital of the company, reduced to Brazilian currency at the exchange of the day the statutes are registered.

(4) All documents must have signatures certified to at the Brazilian consulate of the place where the company was established, or if there be no consulate at that place, then (for the United States) at the consulate-general in New York City.

OTHER EXPENSES—STATE CONCESSIONS.

Expenses, besides the above-mentioned taxes, consist of translation of the documents into the Portuguese language, publication of the statutes, and the decree authorizing the company to operate and do business in the *Diario Oficial* or official gazette, in which governmental notices are made public, and for stamps to be placed upon the documents filed with the Government, said excise stamps being necessary to give them legality.

The services of an attorney under a power of attorney, as above outlined, ordinarily commands a fee of \$1.000 for obtaining the decree and registering the statutes, together with the other steps which have to be taken in relation thereto. Of course this fee is modified to meet the requirements of the situation and will vary according to the work performed.

It may be added that concessions for mining in the several States of Brazil are granted by the several State governments, the only cost being the State taxes which are imposed annually. With actual working concerns, acting in good faith, such imposts are not excessive, as a rule. In general, also, it may be said that there is no difficulty experienced in obtaining these concessions.

COPPER PRODUCTION.

INCREASE IN THE UNITED STATES.

A table giving an estimate of the production of copper in the various sections of this country compared with the Government report of production in 1905 has recently been published. According to these returns the production during the current year will show an increase of about 11 per cent over the 1905 output, but the increase in production over the rate of output during the last few months of 1905 is small, if any. The developments of the next few months may change the estimate in the table, which is as follows:

United States production.

Source.	1906.	1905.	Source.	1906.	1905.
	<i>Pounds.</i>	<i>Pounds.</i>		<i>Pounds.</i>	<i>Pounds.</i>
Montana	340,000,000	314,750,612	Colorado.....	10,000,000	9,404,830
Arizona	300,000,000	236,627,535	Wyoming, Idaho, etc.	7,000,000	5,944,190
Lake Superior.....	230,000,000	230,287,992	Alaska.....	5,000,000	5,000,856
Utah	65,000,000	63,947,261			
California	30,000,000	15,367,106			
Tennessee and South..	18,000,000	14,655,504	Total.....	1,005,000,000	901,630,998

Copper imports, 1906.

	<i>Pounds.</i>
Mexico.....	120,000,000
Canada.....	40,000,000
Other countries	65,000,000
Total.....	225,000,000
Mexico output	160,000,000
United States production, 1906	1,005,000,000
Imports, 1906.....	225,000,000
Total supplies, 1906.....	1,230,000,000
Domestic consumption	720,000,000
Exports	500,000,000
Total consumption.....	1,220,000,000
Reserves, January 1, 1907	10,000,000
To which must be added residual supply held on January 1, 1906.	

GERMAN COAL SUPPLY.

INDUSTRIAL CITIES EXPERIENCE GROWING SCARCITY OF FUEL.

A report from William F. Wright, Consul-General at Munich, says that the coal supply from German mines for the large industrial cities of Germany in the first half of 1906 showed that it was not equal to the demand.

The supply increased 8 per cent from 1905 to 1906 and 12 per cent from 1904 to 1905, although in the last-named year the trade was retarded for two months by a strike. The causes given for the short supply this year are lack of labor and cars to mine and transport the coal. This lessened increase in the supply is certainly not caused by a lesser demand, as all branches of industry have shown great progress in the first half of the current year. The 20 largest industrial cities in Germany used 8,100,827 tons of hard coal in the first half of 1906,

7,429,778 tons in the same period of 1905, and 6,618,984 tons in the first six months of 1904, showing an increase of 671,049 tons, or 8 per cent, in the current year, and of 810,794 tons, or 12 per cent, last year. The supply in the first quarter of the present year was even smaller in quantity than in the same time of last year, which, however, may be explained by the fact that most consumers and speculators laid in large stocks last year against the threatened strike. The supply of Berlin was the least satisfactory of all, as the table below will show, the increase of 1905 over 1904 being far greater than that of the present half year over 1905. The supply to the largest industrial cities in Germany for the first six months of the last three years was:

	1904.	1905.	1906.
Berlin	1,955,069	2,414,041	2,541,704
Leipzig	646,858	738,159	900,190
Cologne	703,890	720,884	770,763
Dresden	493,202	494,254	530,668
Frankfort	346,451	392,602	424,774
Magdeburg	289,687	323,716	345,404
Munich	343,162	364,691	340,006
Altona	125,164	292,580	276,746
Barmen	232,219	246,568	266,391
Nuremberg	161,752	194,353	202,135
Halle	122,297	168,646	177,068

Frankfort and Leipzig show a large increase, the former amounting to 45 per cent, although last year the supply had decreased. Cologne and Stuttgart also show increases. Munich, however, shows a decrease.

MEXICO.

COUNTRY'S GREAT MINERAL WEALTH.

The exports of metals from Mexico during the fiscal year 1905 are figured by the Mexican Investor as follows, calculated in gold:

Silver \$65,523,645, gold \$13,696,146, copper \$29,803,423, lead \$5,504,669. As indicating the immense increase of production, the figures of the fiscal year 1878 show a production of less than \$25,000,000 of silver and \$750,000 in gold. The total production of metals in Mexico from the discovery and exploitation of the first mines by the Spaniards to the present time has been enormous, for the Guanajuato district alone has produced metals of a value of more than \$1,000,000,000. The City of Mexico mint has coined since its establishment in 1537 the enormous sum of \$3,684,018,624, of which amount \$3,546,393,617 was in silver.

STEEL MAKING.

ELECTRIC FURNACES FOR SWEDEN AND GERMANY.

It appears that the Kjelin electric furnace for the production of steel is about to be utilized on a large scale in Sweden, states the London Times. This is to be done in connection with the development of the immense water power of Tralhatta near the extensive ore deposits in Noorland Province. They expect to build a steel mill for producing

at least 500,000 tons annually, with a similar size works at Gothenburg. The Swedish Government has accepted the proposition of a mill company, and will jointly commence the work to develop the power, which it is expected will be ready by 1908 to the extent of 10,000 to 15,000 horsepower. The Krupp works are reported to have acquired the Kjelin patents for Germany, and will erect a large mill for their utilization.

PROPOSED WELSH COMBINE.

“The proposed combination of Welsh steel manufacturers,” the London Times says, “is now understood to be nearing accomplishment. Its objects are said to be: (1) The regulation of prices and the securing of uniformity, (2) to limit production without interfering with good trade, and (3) to apportion certain works to certain districts.”

RUBY MONOPOLY.

PRODUCTION RESTRICTED IN INDIA TO SUSTAIN PRICES.

According to Consul-General William H. Michael, of Calcutta, during the last year in Burma 1,773,129 trucks of ruby earth were washed, at an average of \$1.50 per truck. This is less 130,000 trucks than were washed last year. Mr. Michael continues:

It is reported that this decrease is due to the working out of the Choungzone mine. The output of this mine came from corners and crevices of the rock, which increased the cost of taking out the dirt. Work will soon begin at the Myntada mine, which is very close to the Choungzone, and will use the same washing machinery without necessitating the moving of it. The royalties received by the government from native miners this year amounted to \$62,975, which is about half what it was in 1904.

There was a net profit of about \$40,000 for the year 1905-6, and a dividend of 12 cents a share was declared. But for the control held by a few persons over the ruby deposits of Burma, and the disposition to limit the output, rubies would be 50 per cent cheaper than they are on the market to-day. Burma coal-oil lands and ruby deposits are held in the tight fist of monopoly, and it looks as if no power would be able to break it.

PLANT PRODUCTIONS.

FARMING AND FORESTRY.

NEW WAX ARTICLE.

RAFIA PALM MAY BECOME A RIVAL TO THE BEE INDUSTRY.

Consul Wm. H. Hunt, of Tamatave, advises that Perrier de la Bathie has recently discovered in the leaves of the rafia palm a product which, by its chemical and physical properties, might be classed between wax and gum, and bids fair to become a valuable commercial commodity of Madagascar. Mr. Hunt sends the following description of the new article from a Tamatave newspaper:

The process of extracting the wax is simple. The natives who gather the rafia fiber generally pitch their camp in the neighborhood of a rafia grove, to which they bring the leaves. The fiber is taken off and the leaves are thrown aside in large quantities. The wax is collected as follows:

First, by beating the dry leaves on a dry mat or cloth and gathering the pellicles and white powder which fall from them. Then, after boiling these pellicles and powder, the wax thus formed is kneaded into cakes of any form. This wax, which is very pure, will probably be more highly valued than beeswax, although yet an entirely new product. It first made its appearance in the market place at Maro-voay in October last. The curiosity of the merchants of Majunga being roused, they bought the whole lot at 50 cents per pound, and shipped it to France in order to ascertain its industrial and commercial value. When the governor-general of Madagascar heard of the discovery he ordered a sample of 25 pounds to be forwarded to Doctor Heckel, director of the Colonial Institute at Marseille, who will make an analysis.

Doctor Lacaze, mayor of Majunga, furnishes the following information in regard to the substance:

NET YIELD OF WAX.

It is well to know what a rafia leaf will produce in fiber and wax, the chief products of this palm. The following are the quantities obtained by experimenting on 10 rafia stalks of $3\frac{1}{2}$ to $4\frac{1}{2}$ yards long, ordinary dimensions, for some leaves attain 7 and 8 yards (the weight kilo being 2.2 pounds):

	Kilos.
Total weight of 10 leaves.....	104.500
Weight of green fiber skinned from 10 leaves.....	9.200
Weight of same when dry and ready for sale.....	4.660
Weight of refuse (cane ribs excepted) green.....	32.550
Weight of same dried.....	11.000
Weight of powder unprepared.....	.810
After manipulation, weight of waxy substance from 10 leaves.....	.780

Hence it appears that rafia can yield in wax theoretically some 16 per cent of the prepared fiber, but the experience of a laboratory would not be the criterion of production in actual practice. The natives allow the leaves to remain on the ground to dry, entailing a loss according to the inclemency of the weather or want of care. Then, at the moment when the leaves are shaken or rubbed in order to remove the wax, this excessively fine, light powder remains suspended in the atmosphere, and it is impossible to collect it all with only a cotton sheet to work with. In any case, however, it can be said that the average production of wax would be about 100 grams for every kilogram of fiber obtained. .

PROBABLE USES FOR PRODUCT.

The labor of gathering the leaves can be reckoned a negligible quantity, as the wax is not the primary product taken from the tree, but a refuse product obtained from the leaves already cut down for the preparation of rafia fiber. Supposing that rafia wax turns out to have a value about equal to beeswax; this means a yield of wax equal to three-fifths of the value of the rafia exported. Certainly a very valuable new resource of produce which the natives are likely to take to. In fact, the process implies no great difficult innovation, being merely the utilization of the refuse of an already well-established and remunerative industry.

Nothing is yet decided as to what may be the possible use to which this wax can be put. It might possibly be utilized in the manufacture of bottling wax. Its consistency has led some to think it might be used for gramophone cylinders. In any case, several commercial houses have sent home samples to their firms, and probably in a short time we shall have reliable information on its market value.

RUBBER SUPPLY.

WORLD'S CROP THIS YEAR WORTH ONE HUNDRED MILLION DOLLARS.

Consul William H. Hunt supplies from Tamatave the following interesting compilation of a Madagascar journal on the world's supply and production of rubber:

The automobile, bicycle, and electrical industries are consuming more and more rubber, and the price of the raw material increases daily. To cite only one example: That produced in the Belgian Kongo, called red kaisai, which brought \$1.54 per kilogram (2.2 pounds) in 1902, has this year been sold at \$2.38 per kilogram.

In the Bulletin Economique, of Indo-China, Messrs. Brenier & Claverie estimate the world's supply at 57,000 tons, of which 33½ per cent was produced in South America and 21½ per cent in Africa. French West Africa produced nearly 7,000 tons, against less than 6,000 tons produced in the Belgian Kongo and 3,000 tons from the French Kongo possessions. It is well known that the rubber market at Bordeaux increases in importance annually. The world's net consumption of rubber in 1904 was 57,300 tons, of which 26,470 went to the United States, 12,800 to Germany, 10,030 to England, 4,130 to France, 1,320 to Austria-Hungary, 1,218 to Holland, 748 to Belgium, and 588 to Italy.

According to the *Mouvement Géographique*, of Brussels, the world's production will reach 75,000 tons this year. In any case, its value is estimated at 600,000,000 francs (\$115,800,000).

PLANTING RUBBER TREES.

Rubber that grows in a wild state eventually gives out and it becomes absolutely indispensable to create plantations. The *Annales de Géographie*, edited by Vidal de la Blache, points out the successful results arrived at by the Kew Colonial Gardens, to which is due the planting of 35,000 acres of hevea in the Malacca Peninsula and 40,000 acres in Ceylon. The *Mouvement Géographique*, in a recent number, also mentions the successful efforts of the Belgian Government in its Kongo possessions. Thanks to an energetic influence on the officials and the companies who have concessions, as well as to a very severe system of imposing fines, they have succeeded in a few years in planting more than 12,000,000 rubber trees.

The French colonies have been very desultory in following these examples. In Indo-China progress is barely at the experimental stage, and in the French Kongo the rubber plantations still remain quite inadequate.

MALAY RUBBER CULTURE EXTENDING.

Rubber-culture enthusiasm in the Federated Malay States has led to numerous applications for land, but more particularly in Selangor, where almost all the accessible land between the Klang and Selangor rivers has been taken up for rubber planting, states the British resident general.

Large areas of land have been applied for and granted for the purposes of this industry, and most of the large estates have been converted into or sold to limited liability companies. According to the director of agriculture the area alienated for the planting of Para rubber is some 100,000 acres, of which about 38,000 acres has already been planted. Most of the Para rubber trees of the age of five years or more have been planted 200 to the acre—many estates have as many as 300 per acre. On the recent clearings the average is probably 175 to the acre. The number of trees of all ages in the Federated Malay States may perhaps be put at six or seven millions. The rubber production of 1905 is estimated to have been 300,000 pounds.

BANANAS IN GUIANA.

NEW ENTERPRISE WILL FURNISH STEAMER LINE TO SOUTH AMERICA.

The following report by Vice-Consul D. Mitchell, of Georgetown, of an agreement with an American concern trading in Caribbean waters, indicates extended shipping advantages for American exporters to the north coast of South America:

A contract has recently been made between the Government of Dutch Guiana and the United Fruit Company regarding the purchase and delivery of bananas. The planters of the colony bind themselves to start planting bananas on 2,470 acres, and to increase within three years to a minimum of 7,410 acres.

For a minimum of 20,000 bunches a boat of the company will proceed to Dutch Guiana to buy and transport the same. The service will be a fortnightly one, and later on, as the supply increases, a weekly one.

The prices to be paid for bananas in American currency for the first two years will be as follows: (a) For a bunch of 9 hands, 35 cents during March, April, May, June, November, and December, and 20 cents during the other months. (b) For bunches of 8 hands, 23 cents during March, April, May, June, November, and December, and 13 cents during other months. After the first two years for a bunch of 9 hands, 35 cents in March, April, May, and June, 30 cents in November and December, and 20 cents in other months; bunch of 8 hands, 23 cents in March, April, May, and June, 20 cents in November and December, and 13 cents in other months; bunch of 7 hands, 17 cents in March, April, May, June, November, and December. In other months they are not bought at all. Thirty-six hours after arrival of steamers will be given to planters to cut and transport the bananas.

This contract has to be approved by the Netherlands Government. The needed labor will be imported from India.

PLANTATIONS IN SAMOA.

COST OF GROWING COCOANUTS AND CACAO ON ISLANDS.

Consul-General George Heimrod, of Apia, responds to American inquiries as to tropical agriculture in Samoa, as follows:

Land suitable for planting can be leased from natives from 25 to 75 cents per annum. The area of freehold land is limited and the cost varies from \$10 to \$20 per acre, clearing expenses running up to \$14. The cost of planting cocoanuts and bringing them up to the eighth year, when a return can be expected, is \$135 per acre. The cost for cacao plantations until the sixth year runs from \$150 to \$175 per acre, and rubber \$150 to \$165. Vanilla does not pay to fertilize.

In Samoa most of the land near the water front is owned by the natives and is studded thickly with coconut palms, planted without order or system. They extend back from the coast for miles to an elevation not exceeding 600 feet, and in such proximity to the coast that the palms get the benefit of the moisture carried by the trade winds from the sea. In plantation systems the trees are placed 20 to 30 feet apart. The average yield per acre is from 700 to 1,000 pounds, though 1,200 to 1,400 pounds is not an uncommon yield. The large planters use the hot-air system for drying copra, and copra thus treated can be used for confectionery purposes. The average price of copra in Apia during 1905 was \$67.50 per ton, delivered f. o. b. ship.

TRINIDAD'S INCREASING COCOA CROPS.

Consul William W. Handley reports from Trinidad that the exportation of cocoa from that island is rapidly increasing, the amount having been over \$5,000,000 per annum for four years.

The export for 1905-6 season amounted to 432,268 hundredweight, valued at \$5,742,960. This was \$684,308 greater than the previous year, and every indication points to an increase in production for the

year 1907. The exports of cocoa from Trinidad in 1896 amounted to 209,659 hundredweight, worth \$2,170,276. Thus the island's production of cocoa has more than doubled in the last seven years.

At present the United States is the largest purchaser of Trinidad cocoa, having bought during the year ended March 30, 1906, to the value of \$2,184,912; France, \$1,948,012, and England to the amount of \$695,836. While the growth of production has increased, the value of the cocoa exported, owing to poorer prices, has not increased proportionately during the last two or three years.

CASSAVA GROWING.

FRENCH INDUSTRIAL UTILIZATION OF THE PLANT.

An interesting experiment is just now going on in the French colonial gardens for the industrial utilization of manioc or cassava, leading Consul William H. Hunt to write from Tamatave, capital of the French island of Madagascar, as follows:

In 1904 the minister of the colonies gave notice that the roots merely cut into strips and dried in the sun would find an unlimited demand in French manufactures, which could employ hundreds of thousands of tons a year. Many samples were sent to Nogent-sur-Maine in the course of 1905, and one lot from Vohemar particularly attracted the attention of experts. These manufacturers are of opinion that the manioc thus prepared can be employed either for the production of alcohol or for the preparation of farinaceous foods.

In order to allow the Colonial Gardens to actively continue their investigations the Messageries Maritimes Steamship Company has consented to ship free 5 tons to Marseille, and further, with a view to encourage the export of this product, their agent at Tamatave announces that he will charge temporarily 37.50 francs (\$7.23) the 1,000 kilos (or long ton) on dried manioc cut into round slices shipped from Tamatave to Marseille, Bordeaux, or Havre, reserving the right to fix definitely the freight charge after ascertaining the ratio between the weight and volume.

[Manioc or cassava is a staple farm crop in Florida, where it is considered a prime stock food. Florida starch factories also use cassava, and the plant will also, no doubt, be grown in that State more extensively for the production of denatured alcohol.]

OSTRICH FARMING.

POSSIBILITIES FOR EXTENSION IN INDIA AND AMERICA.

Consul-General William H. Michael reports from Calcutta that the subject of ostrich farming is receiving considerable attention from those deeply interested in the development of India. His letter reads:

It is pointed out by the press that there are millions of acres of land in India well suited to ostrich farming, and that the soil and climate of these vast tracts are as well adapted for this husbandry as that of Africa or Egypt. One journal says that ostrich farms could be started on the edge of the Indian desert, in Sind, and in Baluchistan, which

are at present poor and unproductive, because of barren soils and scant and irregular rains. It would be hard to exaggerate the benefits that would result from the introduction of the new industry. The tracts named would suit the birds. The farming could be undertaken by either European or native capitalists, who would have no difficulty in engaging the services of trained men at the same time that they purchased their ostrich chicks or eggs.

The demand for ostrich feathers of high class is greater than the supply, and the farmers of the Cape and Egypt who give intelligence to the raising of ostriches make large profits, just as the ostrich farmers of southern California have done. A comparison of the soil, climate, and other physical conditions of Africa and Egypt, where the ostrich does well, with the same conditions in parts of southern California, Arizona, and New Mexico would suggest that there is hardly a limit to ostrich husbandry in America.

QUEENSLAND FIBER PLANTS.

VALUABLE TEXTILE GROWTHS SUITED TO THE UNITED STATES.

Consul F. W. Goding, of Newcastle, furnishes instructive information on useful textile plants of Australia, as follows:

The name "boorgay" is the aboriginal word for *Gymnostachys anceps*, one of the Aroidæ which grows on the borders of scrub land on the lower Russell River in north Queensland. The leaf is 3 to 4 feet long, from one-half to three-fourths of an inch wide, and green in color. It thrives best on rich soil, producing a strong fiber, and may be grown in the States bordering on the Gulf of Mexico and the West Indies. The fiber is used by the aborigines for making rope, twine for traps, fish lines, and bags, a rope formed by twisting the leaves being strong enough to sustain a weight of several hundred pounds. The plant is the only plant of the genus.

Another plant indigenous to India is now being grown in various parts of Queensland. It is known under several names, some of which are murva, moorva, chaga chaga, moorgalie, marool, moorgabbie, and bowstring hemp, owing to its close resemblance to the hairs of a violin bow, its technical name being *Sansivieria zeylanica*. It has no stem, the leaves, which are from 4 to 7 feet long and 2 to 3 inches wide, coming up erect from the rhizomes; they are variegated, having alternate stripes of dark and light green. Experiments made at the Queensland department of agriculture prove the great value of this plant, which should be introduced throughout the southern half of the United States.

EASILY PROPAGATED.

Murva is easily propagated by cuttings or by pieces of the rhizomes or roots by cutting the leaves into pieces 5 or 6 inches in length. These soon take root in the ground and in a few months send out rhizomes, whence numerous shoots appear above the ground and grow rapidly. The soil must be moderately dry, as too much moisture will cause the leaves to rot. Under favorable circumstances the plants acquire full growth in twelve months, but usually in eighteen to twenty-four months.

When once established it quickly spreads and on reaching full growth requires no further cultivation. After the second year it is cut in the same manner as alfalfa, after which it at once sends up a new crop of leaves to be cut every year, the growth becoming denser after each cutting. It does not appear to exhaust the soil to any extent. Although essentially a tropical plant it will withstand several degrees of frost.

Experiments show that 1 ton of the fresh leaves will yield 50 pounds of fiber or $13\frac{1}{2}$ tons per acre. The fiber is very soft, silky, and pliant, possessing extraordinary strength and tenacity. Doctor Roxburgh made a line 4 feet long from murva fiber and one of the same size and length of Russian hemp, the latter breaking with a weight of 105 pounds, the murva breaking only with a weight of 120 pounds. Again murva in the untwisted state bore 280 pounds, while sisal fiber broke with a weight of 270 pounds.

Other than the above are many plants the fiber of which the Queensland natives make into twine and rope.

COTTON GROWING.

BRITISH AND GERMAN EFFORTS IN AFRICA.

The British Cotton Growing Association has decided to send out additional ginning and baling plants to Lagos and northern and southern Nigeria with a view to dealing with the largely increased cotton crop next season, which it is confidently expected will be about twice as much as for the present year, which was 5,000 bales. The association's manager in Lagos stated that the natives were well satisfied with the price which was paid to them, and found it to their advantage to cultivate cotton along with their other products. Experiments are being made for improving the quality so as to make the cotton more suitable for Lancashire mills, and he pointed out that the cotton shipped this season had been of a much better quality than previously.

The total production of cotton in all of the German possessions in Africa, according to official figures furnished by Vice-Consul N. C. Schlemmer, of Mannheim, amounts to only 865 bales for the season 1905-6. He adds that the German territory in Africa comprises an area nearly as large as the entire American cotton belt, and that the African natives do not seem to be able or willing to raise cotton at the present prices. The outlook for the production of cotton by the natives of Africa is far from encouraging.

INDIA'S JUTE CROP.

SLIGHT INCREASE FOR THIS YEAR.

Consul-General William H. Michael, of Calcutta, writes that the total yield of jute in India for the year 1905-6, ending with July, was 8,150,000 bales, against 8,200,000 bales last year. Of the new crop the United States got 580,861 bales, the smallest amount since 1900. The raw jute shipments from India to America the previous year amounted to 686,072 bales, valued at \$38,017,500.

Mr. Michael writes that the total exports of jute for the first eleven months of 1905-6 amounted to 4,111,261 bales. Continuing he writes:

These shipments were made from Calcutta and Chittagong. If jute continues to come into Calcutta during the second half of this month (July) as it did the first half, this season's exports will exceed those of 1901-2, which were 4,253,970 bales, and will be the largest ever made from India in one season.

Out of the total quantity exported during the eleven months, there were shipped to the United Kingdom 1,668,873 bales of jute and rejections, and to the Continent of Europe 1,787,375, including 62,424 bales of cuttings, making a total for Europe of 3,518,678 bales. The United States took 580,861 bales, including 244,510 bales of cuttings. All other ports got 11,722 bales. The local mills secured for manufacturing purposes about 3,200,000 bales. The acreage planted to jute this year is 3,271,400, and the yield per acre is expected to be about the same as last year.

HAZELNUTS ADVANCING.

Consul Milo A. Jewett, writing from Trebizond, says that hazelnuts or filberts furnish one of the most important products of that province of Turkey, and of which the United States takes a considerable proportion.

The declared Trebizond exports of hazelnuts to America last year were valued at \$40,726 shelled and \$4,959 unshelled. Other shipments to Marseille and England probably also supplied the American market. The crop now being gathered is of good quality but small. The yield at Kerassund, which produces the largest quantity and best quality of nuts of the province, is estimated at 170,000 hundredweight, and it is said that the total yield of the province will not exceed 380,000 hundredweight of shelled nuts. In 1889, a record year, the yield of shelled nuts at Kerassund alone was about 500,000 hundredweight.

The price of shelled nuts is advancing. The prices certified in the Trebizond consulate during the last twelve months have ranged from \$8.25 to \$9.60 per hundredweight. It is thought that the price of shelled will go over \$12 per hundredweight this year. The shortage of the almond crop this year increases the value of hazelnuts.

GREEK CURRANT SHORTAGE.

NEW CROP ESTIMATED AT 10 PER CENT LESS THAN LAST YEAR.

Consul James Verner Long, of Patras, reports that forecasts covering the present year's crop of Greek currants place it at about 148,000 tons.

Excessive rainfall during entire growing season retarded the ripening of the fruit, so that harvesting has been over a week later than usual. Fortunately, the rainy weather seems to have been general over southwestern Europe, and the consequent cool breezes which blew from the northwest kept the temperature at a low point, with consequent immunity to the vine. A reduced yield, however, soon became apparent and crop estimates at the beginning of June indicated about 10 per cent less than that of last year. This view has since been sustained and is still considered correct, notwithstanding numerous reports reaching Patras about a still larger shortage. An accurate

crop estimate can not be made until the fruit has been gathered from the drying grounds, which requires about ten days.

The quality of the fruit will be superior to that of last year. In fact, market samples of lower grades have been pronounced as "too good" for themselves. Thus it is expected that any shortage that may occur will be made up by a higher standard of quality. Several steamers were expected at Patras to load currants for the United States at the opening of the new season, which began August 23, as provided by law. It is believed that the opening prices will rule between 15s. 9d. and 16s. (\$3.83 to \$3.89) per hundredweight cost and freight to New York for ordinary fruit.

IMPORTANT MOVE IN PORTUGAL.

NATIONAL SYSTEMATIC EFFORT TO RECLAIM WASTE LANDS.

Portugal, according to Vice and Deputy Consul R. H. Kinchant, of Lisbon, has started in on a system of land reclamation which, if as successful as it promises to be, must result in similar movements in various parts of Europe. He writes:

In the south of Portugal a serious attempt is being made with some chance of success to bring back into cultivation a large tract of land. This country being essentially agricultural, any steps to reclaim land that has gone out of cultivation, estimated at 4,314,000 hectares (about 10,000,000 acres), or 44 per cent of the total area of Portugal, are a move in the right direction.

Some energetic members of society in the district of Serpa, in combination with the municipal authorities, have set to work upon 100,000 acres, dividing it up into allotments of 15 acres each and letting it at a nominal rent, calculated according to the estimated value of the land, which has, as it were, four classifications, the highest quit rent being placed at \$3.20 and the lowest at 40 cents per allotment, free of local rates and taxes for ten years.

Quite a heterogeneous mixture of settlers has already taken possession of their tenements. Carpenters, masons, doctors, chemists, barbers, seamstresses, tailors, and even beggars, figure in the list.

One of the chief difficulties to be overcome before making the allotments was to deal with the proprietary rights of bee keepers, who centuries ago had certain privileges conferred upon them whereby they did a thriving trade in honey and wax. This trade has in later times diminished, owing to the destruction of the floral produce of the land, chiefly by firing when portions thereof were cleared for wheat and other cereals. Matters have been amicably settled for the bee keepers and the embryo agriculturists. The success of the scheme as far as it has gone has stirred the ambition of the residents in a large part of the north of Portugal, where a project on similar lines is being set on foot to bring back into cultivation something like half a million acres.

COOPERATIVE FARMING.

GERMAN MUTUAL AGRICULTURAL ASSISTANCE BODIES.

Cooperative farming associations in Germany are interesting the Spanish people, a Seville paper publishing the following article

thereon, which was translated and forwarded by Vice-Consul Charles Karminski:

At the close of 1905, 17,162 cooperative farming associations existed in the German Empire, comprising a membership of over one million farmers; 16,230 of the above number of associations were confederated. Out of the 9,411 associations operating in Prussia 6,059 facilitated credits to farmers, 776 attended to the supply and demand, and 1,728 to dairying. In Bavaria 2,613 of the 3,294 associations dedicated their work to furnishing credits to agricultural undertakings, 234 to supply and demand, 247 to dairying, and 200 to various other purposes, all, however, fostering mutual assistance to husbandmen and thus redounding to their benefit.

The cooperative associations of credit expend loans amounting to, on the average, from \$71,410,000 to \$73,340,000 annually. In 1905 the cooperative bodies for the creation of demand purchased fertilizers, forage, seed, coal, and other items amounting to \$12,062,500. On the other hand, the centers of supply and dairying, which, in a comparatively short time, have entered a career of great prosperity, realized over \$965,000 on their transactions.

TURF AND MANURE.

Mr. Karminski also writes concerning the effect of turf upon ordinary manure, as follows:

Director Immendorff, of the agricultural test station at Jena (Germany), advocates the use of turf as a means of preserving manure. Results obtained through experiments in and about Jena demonstrate that the use of turf is far more efficient in preventing loss of nitrogen, while fermentation is in progress, than is sulphate of lime, phosphate of lime, sulphuric acid, etc. Turf permits the escape of but very little nitrogen, while the application of the above-named chemicals is most deficient in result and expensive. The discovery of Professor Immendorff merely corroborates experiments of a similar nature conducted by Italian agriculturists.

TOBACCO CROPS.

SUCCESS IN JAPAN AND GREECE.

Consul George Horton, of Athens, writes that the Greek tobacco crop of 1905 was the largest Greece ever harvested—about 198,000,000 pounds. The Sary brand crop was about 11,000,000 pounds. This brand is in great demand for Egyptian cigarettes. Alexandria, Egypt, has 25,000 88-pound bales of inferior grade in storage. Most of Egypt's cigarettes are made by Greeks, because cigarette paper is too expensive in Greece, where it is a Government monopoly. This has led to the use of a cheaper, hence inferior, paper, and the loss of an industry indigenous to Greece, but which has gone over to Egypt, for most of the famous cigarette makers of Egypt are Greeks.

Consul-General Miller, of Yokohama, reports that the weather in Japan has been very favorable for the tobacco crop this year and that the growth of the plants is very satisfactory throughout the Empire. The total harvest is estimated at 12,839,980 kwamme, or about 106,571,800 pounds, and the net profit to the Government monopoly office 32,000,000 yen, or approximately \$16,000,000.

CEREAL PRODUCTS.

INCREASES IN BOTH ITALY AND ARGENTINA.

Consul-General H. de Castro reports the Italian wheat crop of 1905 at 4,490,673 tons, against 4,707,790 tons in 1904—a difference in yield for the two years that was due to the diminished acreage sown and to a decrease in the yield per acre. The acreage sown in 1905 was 13,134,116 acres, in 1904 13,335,979. The yield per acre in 1905 was 0.33 of a ton, and in 1904 0.341. The yield of corn was 2,465,739 tons on 4,638,650 acres, against 2,378,579 in 1904 on a few less acres than were sown in 1905. The rice crop amounted to 42,938 tons in 1905, against 49,122 tons in 1904.

The Argentine Ministry of Agriculture has issued its estimate of area planted and probable yield of grain and seeds for the new year crop. In wheat 6,000,000 hectares (14,820,000 acres) have been sown; in maize 3,000,000 hectares (7,410,000 acres), and in linseed 1,100,000 hectares (2,717,000 acres). The probable yield is given at: Wheat, 4,800,000 tons; maize, 6,600,000 tons, and linseed, 770,000 tons. The crops recently harvested gave a yield of wheat of 3,672,000 tons from 14,017,991 acres planted, and of linseed 591,900 tons from 2,526,316 acres planted.

WINE CROP.

PROSPECTS OF COMING FRENCH VINTAGE ESTIMATED.

Vice-Consul Charles Karminski transmits the following translated statement from a Seville paper on the prospects of the coming vintage in France:

The French department of agriculture has just published official estimates on the coming vintage. The following numbers betoken the prospective features of the crop, viz: 100, very good; 80, good; 60, fairly good; 50, passable; 30, middling; 20, bad. In this way the following estimates have been formed, viz:

1 department, comprising 37,065 acres	100
35 departments, comprising 1,714,538 acres.....	99-80
32 departments, comprising 2,061,928 acres.....	79-60
3 departments, comprising 47,320 acres	59-50
2 departments, comprising 485,611 acres	49-30

The total crop will probably yield 1,320,850,000 gallons of wine, not including the Algerian crop, depending on the conditions that prevail during the period intervening between the date of the above estimates and the time of gathering.

The French department of agriculture has also published estimates on the next crop of cider, which, it is calculated, will yield from 396,255,000 to 528,340,000 gallons.

POOR GERMAN PROSPECTS.

Consul W. Schumann, of Mainz, says the outlook for either a fine or fair vintage in Germany is fast disappearing.

To the middle of July the condition of the vineyards was most satisfactory. About that time, however, several very cold and foggy

nights set in, followed by intense heat. Soon after that very much feared disease of the vines, peronospora, made its appearance, and spread with most extraordinary rapidity to almost all vineyards—to those that had been sprayed with sulphate of copper solution as well as to those that had not. The infection assails leaves and also the grapes. The leaves turn rusty and the fruit withers, causing the fruit to drop off. Strenuous efforts are being made to combat the disease, but as present there seems little prospect of saving much of the vintage in some of the wine-growing districts.

HALF RAISIN CROP.

GREATLY REDUCED SPANISH YIELD OVER LAST HARVEST.

Consul H. A. Johnson, of Valencia, makes a second report on the Valencia and Denia raisin crop for 1906, as follows:

Now that grape gathering is in full swing raisin growers are disagreeably surprised to discover that the crop is falling far short of all anticipations, the yield in most cases being scarcely half what was harvested last season on the same area. Indeed the most optimistic estimate at present does not exceed a total of 300,000 hundredweight against 600,000 hundredweight last year.

Prices have opened at 60 pesetas (\$10.30 approximately) per 100 kilos, which gives the following equivalents for the usual classifications in United States currency, per kilo c. i. f. New York: Offstalk, 11 cents; fine offstalk, 11½ cents; finest offstalk, 12½ cents; selected, 14 cents; layers & crowns, 14½ cents.

Packers have again failed to agree among themselves on the all-important questions of prices and dates of first shipments, proving once more how very slowly the spirit of association strikes root in this country. With a continuance of fine weather during the drying period the fruit promises excellent quality. Opening prices, already exceptionally high, are further enhanced by the recent recovery of Spanish currency, which now stands at a depreciation of only 10 per cent, against 30 per cent at same period last year—that is to say, the same 60 pesetas per 100 kilos raisins last year would have produced 20 per cent less in United States gold than the prices quoted above.

FOOD.

THE WORLD'S SUPPLY.

PURITY IN GERMANY.

BENEFICIAL EFFECT OF THE MUCH NEEDED GOVERNMENT INSPECTION.

According to Consul Carl Bailey Hurst, of Plauen, praiseworthy care has been devoted for some years to the inspection of food products in Saxony. He writes:

The whole system of supervision, organized into 2 state institutions, 3 municipal inspection laboratories, and 14 subordinate laboratories, is under the direct control of the Government. The report of the inspection exercised in Saxony during the year 1904 has been recently prepared in the Saxon ministry of the interior and given to the public. A decree of August 15, 1901, directs that for every thousand inhabitants at least 30 samples of food, beverages, or utensils shall be inspected. During the year under consideration, within the five chief districts of the Kingdom 93,332 analyses were made, in addition to 22,148, which, as an exception, were divided among the three municipal laboratories, making a total of 115,480 analyses. All of the examinations were not begun on the same basis, because many food products were brought voluntarily by storekeepers for their own enlightenment, while others were gathered in the open market. Particularly in the latter cases, where adulteration was discovered, the sellers in question were warned against further disposal of the wares, so that out of the 15,000 samples inspected some 10,000, or about 8½ per cent, were directly challenged on the initiative of the Government chemists. In 1903, 10.8 per cent, and in 1902, 11.6 per cent, of the samples examined were declared injurious.

MARKED BENEFITS FROM INSPECTION.

These statistics show that the food-inspection system as practiced here has had a very satisfactory effect, and that each year the market is becoming gradually purged of deleterious food products. The action of the inspectors, at the instance of the Government, has been considerate and advising rather than tending to wholesale indictments, with the result that the inspection system has not only gained the confidence of the consuming public, but apparently that of manufacturers and merchants. The laboratories are accordingly looked upon by all classes as an unqualified boon. Experience has also shown that judicial proceedings against pure-food offenders do not infrequently end in the acquittal of the defendants through some technicality. So that a conciliatory attitude has been here both more efficacious and easier,

a simple warning emanating from the inspectors having a salutary effect in checking the sale of articles found unwholesome or injurious.

Among the specific cases examined, the grounds for objection to meats were the use of a harmful preservative salt, and in several instances preserved fish and crabs had been treated with borax. The records show that a number of new preservatives offered to the butchers were brought by the latter to the laboratories for an opinion and, upon learning that the preparations contained injurious ingredients, of their own accord declined to use them.

ADULTERATIONS DISCOVERED AND RESULTS.

Most frequently, and in nearly all districts, sausage, used in tremendous quantities here, is adulterated with meal or bread. Occasionally the wares were found spoiled. From many hundred samples of sausage inspected only one was found to be artificially dyed, and one sample revealed the presence of an innovation in the way of a glutinous preparation to give the mass greater consistency. Many samples of milk were found diluted, and cheeses adulterated with potato flour or grated potatoes.

The chief objection to the butters examined was a superfluous quantity of water, reaching as high as 31 per cent. Occasionally the butter was oversalted. Oleomargarine was used in great quantity, but seldom was fault found in the many samples examined as to the substances in composition. The chief difficulty lay in contravention of the regulations governing packing and sale. In many instances, especially with small dealers, oleomargarine was sold as pure butter, and often in the printing of the labels the words "Substitute for" were printed in small letters and the word "butter" sufficiently large to be read across the shop, so that people were presumably led to buy oleomargarine when they were of the opinion that they were getting a dairy product. No case was reported of harmful effects in the use of the substitute.

Considerable quantities of table oil, sold as pure olive oil, were found upon analysis to contain a large admixture of cheaper oils, and one variety that a wholesaler had put on the market as an olive oil blend was found to contain entirely inferior substitutes, or at most only a small percentage of pure olive oil.

PURER SPICES AND SWEETS ON MARKET.

Trade in spices has become easier to handle, as there have been comparatively few cases of adulteration found. In some districts rigid inspection failed to reveal any instances of falsification, and in others, where formerly adulterated spices were generally on the market, dealers had almost entirely excluded the condemned brands from their stores. The grocers themselves have been very watchful, and have in a commendable manner refused to accept any but pure spices, and in consequence the spice millers offer a better class of goods.

Frequent analyses disclosed only four cases where sugar has been found objectionable. Twice on account of a too high percentage of ultramarine, once on account of uncleanness, and once on account of adulteration with meal. In this connection the local courts have held it unlawful to sell candies or cakes, generally bought by children, to

which small metal pieces were attached. A former vigorous campaign against fruit sirups and bottled lemonades has been so far successful that objection was found during the year in only very few instances. Inspection has been carried to the extent that at country fairs lemonade has been objected to that was being sold in uncleaned herring tins or cooled by bad ice. Fruit jams have been found to contain glucose, grape skins, and dyes; seldom, however, salicylic acid. One ingenious manufacturer discovered how to make pure plum jam with beets, but as his attention was called to its lack of harmony with the pure-food laws the sale of this product was discontinued.

INSPECTION OF DRINKS, AND DISCLOSURES.

Cognac, rum, and cordials were frequently found to have been made from essences, blended unlawfully or containing dyes or preservatives, among which salicylic acid was most found. Many analyses showed that the wine offered on the market was only slightly or not at all adulterated. Objection was found to some beers on account of lack of clearness or on the ground of deterioration. There were only two cases in which objection was found to coffee, and these because too long storage had deprived the coffee of its aroma. Chicory correctly sold as a substitute for coffee was in one case found to be spoiled. All samples of tea were found good.

Trade in cocoas and chocolates has met with a marked improvement, particularly on account of the energetic action of the Union of German Chocolate Manufacturers. The commendable regulations governing this body prohibit, among other things, the use of scraps in the making of first-grade products, the use of the name of pure chocolate or cocoa where waste has been employed in its composition, and heavy fines for cases where courts may have decided that there has been a contravention of the mutual agreements of the union. These strict measures, together with the surveillance of the supervising chemists, have fully done away with gross adulterations in this line here. The few cases that came under observation were those where chocolate wares were mixed with artificially colored flour, or sugar was added in too great a degree, in one instance as high as 90 per cent. It is worth mentioning that one manufacturer brought into the market a so-called extra-fine "Nutrition-Cocoa," composed of cocoa and potato flour, that was eventually objected to and brought into court, but the manufacturer was acquitted.

TOBACCO FOUND FAULTLESS—OTHER INSPECTIONS.

All smoking and chewing tobaccos were found to be entirely free of objection. One sample of snuff discovered to contain powdered glass was challenged and the sale stopped.

The activity of the inspectors was as usual extended to all manner of utensils used in eating, drinking, and cooking, and an over percentage of lead was found in many of the articles examined. In earthenware pots a deleterious glaze was repeatedly found, while glazes containing antimony were only occasionally observed. Brass spigots on vinegar vessels were discovered covered with verdigris.

In a number of examinations solder such as used on cooking vessels was found to be surcharged with lead. Injurious dyes, as chrome, lead,

and zinc were found in pastels, india ink, colored pencils, and billiard chalks. In toys lead in nonpermissible quantities was found. As a rule cosmetics analyzed were discovered to be unobjectionable. Only in one case was lead found in a hair-dyeing remedy and another time copper. Soft soaps were found to contain potato flour and other foreign substances, in spite of the fact that local soap makers have openly condemned soap adulteration.

PUBLIC SUPPORT OF PURE-FOOD LAWS.

Only in isolated cases was the action of a grocer signalized as subject to complaint. Most dealers are not only contented with the supervision, but apparently grateful for the information given. In nearly all instances the cooperation of the police, who often secured samples where the inspector was not able to get them, was of great assistance. On the whole the Saxon pure-food laws have been cordially sustained by authorities, dealers, and people. The decreasing number of objections found in foods, beverages, and utensils clearly demonstrates the effectiveness of the official surveillance as exercised here, as well as the beneficial result attained in behalf of the public.

AMERICAN GOODS IN EUROPE.

EXCELLENT CHANCE TO SELL CEREAL FOODS—AROUSING PREJUDICE.

Consul J. I. Brittain, of Kehl, Germany, draws a favorable picture of the possibilities of American cereal foods selling successfully in Europe. He calls attention to considerable success already achieved by certain brands. He writes:

While calling on a Strassburg grocer yesterday who has recently begun the sale of a certain American cereal food, I asked the proprietor what success he had with the article. "Very good," he replied, "but I wish the manufacturers would pack it in boxes as they do one of their cereal foods and print the directions for its use on each box in German. We are obliged to explain to everyone who comes just how the food must be prepared, and sometimes before they reach home our customers forget the instructions and fail to return and purchase again. Where our customers learn to use it they return for more. I sell it by the pint measure, and yesterday one family bought 10 pints."

The same grocer began sometime ago to sell another cereal food, and at first, aided by the advertisements in the Strassburg papers, sold a fair amount. The company, however, ceased advertising too soon and the sales fell off so that no more of this brand will be ordered by the merchant.

One brand was advertised by a young woman who served it free for two days to all comers at the grocery above mentioned. Had she remained longer she might have done much better, for the Germans are conservative and will not spend money on experiments: nevertheless many of them would appreciate cheap cereal foods if they could learn to know them without expense in the beginning. The average German shopkeeper, however, will not spend his money in advertising

a foreign food product, and will only purchase what has an assured sale, preferring to take no risks. The only successful way of introducing many American foods is through a practical free demonstration of their value and inexpensiveness.

A TRADE TRICK.

A year ago I saw a cereal food advertised in a Strassburg shop, and going in to purchase a package, was informed that the shop kept only small packages for sale at 10 pfennigs (2½ cents) a package. Upon examination I found that the packages were samples which had been given for free distribution and refused to pay, and, as the shopkeeper insisted upon having the 2½ cents, I left without the package. I would suggest that all food products be advertised freely in Germany by traveling agents, and where possible served free for several days.

If there ever was a time when the American manufacturer of food products should be represented in Germany by energetic agents it is the present, especially when we consider the feeling against our food products in consequence of recent developments. It is easy to destroy confidence, but difficult to restore it, especially is this true when there are such persistent efforts being made to keep out certain American food products on the part of those who do not wish any competition in Germany. It appears many of the German newspapers are conducting a campaign against certain American food products.

MEAT IN GERMANY.

REMARKABLE FALLING OFF IN FOOD SUPPLY.

Consul-General William F. Wright, of Munich, reports a large falling off in the consumption of meat in Munich owing to the high prices of both meat and cattle. The total consumption, he says, of all kinds of meat in 1905 amounted to 76,581,806 pounds, of which 76,142,598 pounds were consumed by human beings, or 142.58 pounds per capita of a population of 534,000, against 151 pounds in 1904.

There was a falling off in the importation of cattle from Austria-Hungary, and increased difficulties, in addition to the increased duties, have been recorded. For the first time in their history the stock yards and slaughterhouses have had to face and record a deficiency, the loss for the year being \$8,000.

The average prices for meats, per pound, in cents, in Munich in the years indicated were as follows:

	1904.	1905.	1906.		1904.	1905.	1906.
Oxen.....	12-19	13-18	15-19	Calf	10-12	11-13	11-15
Cows.....	10-15	12-15	15-18	Swine	11-19	13-16	13-17
Bullock	11-13	11-13	13-16	Sheep	8-11	9-11	10-13

CANADA AND GREAT BRITAIN.

LARGE SUPPLIES OF DAIRY ARTICLES AND MEAT.

Returns of Canada's foreign trade for the year ending June 30, 1906, show that exports of Canadian cheese to the British market totaled 214,877,077 pounds, of a value of \$24,300,908. The quantity was about the same as in 1905, but the better prices prevailing in 1906 showed an increase in value of \$4,126,697. Of Canadian butter 32,904,900 pounds, valued at \$6,802,003, found its way to Britain last year, which represents an increase of 2,914,321 pounds, and an increase in value of \$1,233,004.

Of other Canadian exports to the United Kingdom, bacon to the amount of 98,173,242 pounds, valued at \$11,563,619, was sent, as compared with 116,705,157 pounds, worth \$12,180,817, in the year 1905. Canadian wheat amounted in 1906 to 36,027,692 bushels, as compared with 11,280,407 bushels in the previous year. A total of 13,503,781 pounds of canned meats, valued at \$1,340,880, was sent, compared with 38,190,651 pounds, valued at \$3,525,270, in 1905. Cattle to the number of 166,278, valued at \$11,079,065, were exported, which about equaled the trade of 1905.

Sales of Canadian eggs in England in 1906 totaled 2,688,977 dozen, valued at \$448,463, as compared with 3,352,485 dozen in 1905, of a value of \$660,610.

BAD BUTTER FROM HOLLAND.

The British customs took 1,875 samples of imported butter last year, the consignments coming from 14 countries, and the London Commercial Intelligence states it as remarkable that, except for one "doubtful" sample from the United States, Holland provided all the bad and doubtful shipments. All the adulterated consignments, 71 in number, were of Dutch origin, and the commissioners expressed a regret that the penalties imposed in the prosecutions which followed were on several occasions insignificant in amount, even in cases in which the adulteration extended to large consignments of considerable value.

AMERICAN PROVISIONS.

TRAFFIC IN COUNTRY'S LEADING IMPORTS AND EXPORTS.

The foreign commerce of the United States for the year ending June 30 was \$2,970,428,343, exclusive of gold and silver. Of the imports 20.8 per cent were articles of food and animals. The most important of these was sugar, the imports of which reached a total of 5,127,301,903 pounds, 410,544,618 pounds coming from Porto Rico and 746,602,637 from Hawaii.

The imports of coffee and tea show a decline. From Brazil we bought 623,307,861 pounds out of a total of 851,668,993. These figures do not include imports from insular possessions, which in the fiscal year 1906 amounted to 2,147,279 pounds from Hawaii and 203,455 pounds from Porto Rico. Not since 1901 have coffee imports been so low, the figures for 1902 having been 1,056,541,637 pounds. Tea imports declined to the lowest point since 1902. The average for several years of over 100,000,000 pounds, dropped for 1906 to 92,561,466

pounds. China and Japan each furnished us with about 37,500,000. The imports of crude cocoa reached their highest, amounting to 80,117,402 pounds, while foreign spice purchases were 56,246,959 pounds.

The total value of the exports of American provisions and dairy products was \$210,990,065, against \$169,998,873 in 1905. The exports include 64,523,359 pounds of canned beef, valued at \$6,430,446; 268,054,227 pounds of fresh beef; 4,719,805 pounds of cured beef; 361,210,563 pounds of bacon; 194,267,949 pounds of hams; 155,265,158 pounds of pork; 741,516,886 pounds of lard; 221,452,249 pounds of oleo oil and oleomargarine; 7,926,786 pounds of sausage; 27,360,537 pounds of butter, and 16,562,451 pounds of cheese.

AMERICAN APPLES ABROAD.

OPPORTUNITY TO SELL AMERICAN FRUIT IN SCOTLAND.

Consul Rufus Fleming reports that there are large sales of American apples, dried and fresh, in his district, in and round about Edinburgh, Scotland. Mr. Fleming has forwarded a list of the leading dealers of his district. This may be seen or a copy had upon application to the Bureau of Manufactures, Department of Commerce and Labor, where it is on file. The consul writes:

Large quantities of evaporated apples come to this market each year, between November and June, from the United States and Canada. A leading wholesale dealer says that the imported article does not, as a rule, remain in perfect condition here during the summer months, as the fruit ferments and eventually becomes somewhat rancid. While this fruit is off the market the supply of fresh fruit is supplemented by canned apples from the United States and Canada.

So long as the evaporated apples remain in first-class condition there is a ready market for them; in fact, the importer above referred to states that the demand usually exceeds the supply. The fruit comes here in cases, each containing 4 dozen 1-pound cartons. In the past three or four years the average wholesale price has been about 5 shillings (\$1.21) per dozen cartons. At the end of last May and early in June the prime fruit was sold at 7 shillings (\$1.70) per dozen cartons.

FLOUR IN JAPAN.

UNITED STATES HAS MONOPOLY OF TRADE.

The report of Consul Hunter Sharp, of Kobe, and the Japanese official statistics show a remarkable growth in the trade of one American commodity. Mr. Sharp writes:

The United States supplied more than one-half the wheat imported into Kobe during 1905, or an increase of \$223,444 over the previous year, while Australia contributed nearly one-third, with an increase of \$163,650. With regard to flour, the United States practically monopolized the market. The Japanese are rapidly adopting the use of wheat and flour instead of an exclusive rice diet. Much wheat is now consumed among the working classes, it being mixed with rice, this

having been found not only cheaper and more strengthening but it acts against beriberi, a disease peculiar to rice-eating people.

The demand for flour is chiefly confined to the lower grades, which is not only used by the poorer classes but is being extensively utilized for making paste in the paper industries, such as the manufacture of screens, fans, kites, and other articles.

The American flour comes principally from the Pacific coast, and has the advantage of quicker delivery and lower freight rates than can be obtained from Australia. The imports of wheat and wheat flour were as follows:

Country.	Wheat.		Flour.	
	1904.	1905.	1904.	1905.
United States	\$119,857	\$343,301	\$1,350,626	\$1,857,687
Australia.....	48,978	212,628	16,344	37,154
British India.....	8,261	102,213	769	13
Canada	52	.....	64,300	39,948
Total.....	177,148	658,142	1,432,039	1,857,687

The total imports of wheat flour from the United States into all Japan, which for the years 1899, 1901, and 1902, according to the Japanese Yearbook, averaged \$1,337,000, amounted in 1904 to \$4,670,000 and in 1905 to \$4,810,000. Purchases of American wheat showed still greater growth, the amount being insignificant five years ago, but aggregated \$423,000 in 1904 and \$1,214,000 in 1905. Japan bought also \$604,500 of wheat from Australia and \$52,000 of wheat flour from Canada. The total purchases of wheat flour by Japan in 1905 footed up \$4,975,000 and \$2,006,000 of wheat, so it will be readily seen that the United States enjoyed the lion's share of this trade.

CONDENSED MILK.

SPAIN AFFORDS IMPROVED MARKET FOR DAIRY GOODS.

Richard M. Bartleman, consul-general at large, late consul at Seville, directs attention to the fact that an exceptional opportunity is afforded for the sale of American condensed milk in Spain as a result of the decree lately issued by the Spanish Government, making certain tariff retaliations against Switzerland.

By this decree, which became effective on August 1, 1906, condensed milk originating or produced in Switzerland is subject to a duty of 50 per cent in addition to the rate imposed on condensed milk originating in other countries. Under the new Spanish tariff the rates imposed on condensed milk are as follows:

[In pesetas per kilogram. Peseta = 19.3 cents; kilogram = 2.20 pounds.]

	Maximum.	Minimum.
Milk, concentrated or preserved with addition of sugar.....	3	3
Same, without sugar or other substances	1	1
Condensed milk, preserved with addition of other substances except sugar ..	2	1.50

[The advantage of American shippers to Spain is still more complete with the concession of the minimum tariff rates on all items.]

OLEO IN SOUTH AFRICA.

INCREASING DEMAND FOR FOOD OILS AND GREASES.

Consul-General H. L. Washington, of Cape Town, supplies trade information concerning oleomargarine in South Africa as follows:

The laws of Cape Colony specify that oleomargarine must be sold as such, and packages offered for sale must be stamped "Oleomargarine" on one side and on the top. When exposed for sale by grocers oleomargarine must be labeled as such. The general duty is 2 pence 1 farthing ($4\frac{1}{2}$ cents) per pound, or 2 pence (4 cents) from Great Britain, and the present retail price is 1 shilling and 2 pence (28 cents) per pound.

There is no tax on the manufacture of the article. It appears that attempts have been made to manufacture oleomargarine here, and at the present time a small quantity is being produced, but the output is so small that it does not enter into the general provision trade of the country to any extent. The necessary materials for the manufacture of oleomargarine are not thought to be procurable here in sufficient quantities to make the industry pay, as the great majority of the meat consumed is imported, and the material usually secured from slaughter houses is therefore scarce. Lard sells at 10 pence (20 cents) per pound; milk at 1 shilling and 6 pence (36 cents) per gallon. Oleo oil and cotton-seed oil are necessarily imported, as they are not products of this country. Those in a position to judge seem to think it impossible to make the manufacture of oleomargarine pay here.

In 1904 oleomargarine was imported into this colony to the amount of 497,398 pounds, valued at £9,087, equal to \$44,222, of which 42,714 pounds came from the United States. The principal supply sources were the United Kingdom and Holland. If Americans are interested in the export of oleomargarine, it would appear that for a really first-class grade of the product there is a comparatively good sale at the price quoted. The sale is increasing with an increasing demand.

WORLD'S YIELD OF HONEY.

Vice-Consul Charles Karminski, of Seville, furnishes recently published statistics in relation to the world's production of honey, which designates Spain as second in the supply of that product, the total number of her beehives being 1,690,000 and the quota of honey furnished by her 19,000 tons out of 80,000, the world's yield. Germany, with 2,000,000 beehives, produced 20,000 tons of honey, a larger quantity than all other countries. Austria, ranking third, produced 18,000 tons of honey, France 10,000, Holland and Belgium less than 2,500, and Greece, Russia, and Denmark 1,000 tons each.

TEXTILES.

TRADE CONDITIONS.

FLAX SPINNING IN FRANCE.

IMPORTANT AND PROFITABLE REELING INVENTION.

Consul C. J. King, of Lille, sends an interesting report on the spinning of flax and flax waste. He also describes a new method for the spinning of these articles that should be of considerable value in development of the linen industry in the United States. He writes:

Of late years much uneasiness has been observed in flax-spinning circles, owing to the popularity and cheapness of cotton goods. In fact the increasing cost and insufficiency of the raw material used in the manufacture of linen are slowly placing linen goods among articles of luxury. This is generally conceded and will eventually manifest itself unless there is an increased production of flax and a decrease in the expenses of spinning. Such being the situation, cultivators have been offered premiums for producing flax, and the ingenuity of the spinners has been bent on utilizing the last shreds of the fiber. To this end no little success has been attained by interweaving flax and cotton yarns. Not only a means of keeping up the output of flax yarn has resulted, but the market has been enriched with a cloth unrivaled as a fancy shirting, one that gives satisfaction both in appearance and in wear, and costing only a little more than cotton goods and much less than pure linen.

NEW INVENTION FOR SPINNING.

Notwithstanding the continual propping up of new outlets for flax yarn, it was desirable to devise a means of less expensive spinning of the more hygienic and cleaner fiber, especially for wet spinning. After many efforts in that direction success seems to have been achieved; for a very successful experiment is now attracting the attention of the important spinners of this district. It is a recently patented process, tending to simplify the present method by applying the system of spinning cotton to flax. It consists in replacing the high cumbersome machinery now necessary in flax spinning by low self-acting reels such as are employed in cotton spinning. The machinery differs little in appearance from the cotton frames, being simply adapted to the exigencies of the flax fiber. The bobbins are set at the back, the yarn running off through the watering tank (for wet spinning) placed between the bobbins and cylinders. As the yarn passes through the cylinder the water is pressed out into a canal directly under the lower cylinders. The yarn then runs off perfectly dry to the reels, and, owing to the long self-revolutions, a better and smoother yarn is the result. The new method decreases the general expenses and saves

labor, and the air of the rooms is less infected and the floors are changed from stagnant pools into dry and sanitary places.

This adapting of the system of cotton spinning to flax, with certain cylindrical modifications, has been the outcome of a series of experiments to spin card waste and noils. The inventor, Arthur Guillemaud, having arrived at satisfactory results, tested the same with real fiber, which proved successful.

THE SPINNING OF FLAX WASTE.

The spinning of flax waste has within the last few years made great strides toward a successful issue. Up to within a few years this industry was carried on by flax spinners when the raw material was very expensive and generally put aside as soon as the fiber became cheaper. The great difficulty has not been so much in the spinning of the noils and card waste as in the endeavors to run off a yarn to be marketed at a price lower than that demanded for flax yarn. This is sometimes possible when jute and flax are at abnormal prices, but hardly profitable with the two fibers selling at normal figures.

It is true that the threading of noils, washed and card waste is done by manufacturers at more or less profit, as then the wastes are treated as by-products, requiring simply an extra expense of labor to give them a value much superior to that obtained from the paper maker. It is doubtful whether the spinning of flax waste as a special and distinct industry could succeed, although many inventors claim that the proposition is both feasible and remunerative. According to the most advanced method, it would appear that the mixing of the different grades of waste, dissolved by chemicals before threading, produces a yarn of excellent quality, rivaling the real article in regularity of finish and cheaper to turn off into yarn than if noils, washed or card waste alone was employed.

NEW FACTORY—PRICES SOARING.

In order to test to the fullest possible extent the proposition of spinning flax waste on a large scale, a factory financed by local capitalists has been erected and equipped near Lille, and will be in operation by October. Owing to the large quantity of waste required for the undertaking and considering the very limited quantity of waste obtainable, much opposition may be expected on the part of the paper makers, who depend upon a regular annual supply of this material. The paper makers can scarcely do without the flax waste and are prepared to pay exorbitant prices to prevent the stock being utilized for other purposes. Already, in the fall of 1905, an advance of 40 per cent in price was freely given by paper makers to capture the contracts sought by the new concern.

COTTON GOODS IN MOROCCO.

A LARGE AFRICAN TRADE WORTH CATERING TO.

According to Consul-General Hoffman Philip, of Tangier, there is an exceedingly good market in Morocco for cotton cloth goods particularly among the Mohamedan population. He writes:

This important and growing trade is entirely in the hands of European firms; Great Britain alone sells annually about \$2,680,000 worth of

cotton goods in Morocco. However, I am positive that American goods would be very popular here if carefully introduced. The first and most important step in the initiation of this trade would be to obtain samples of the goods finding most favor here as to quality, length, breadth, etc., and then to confine the exportations principally to those requirements. One of the chief impediments to American competition in the cotton and cloth goods trade of Morocco is the system of current accounts maintained between British and other firms and importers in this country. By these means extensive business transactions are maintained without the necessity for large local capital here. That this method appears to have its advantages is evinced by the remarkably small number of business failures.

However, it would be infinitely to the advantage of American firms to have an American representative here, and one man of this kind would probably be in a position to establish a trade in a few months that would otherwise require years to build up. The demand for cotton duck in Morocco is much less important than for other classes of cotton goods. [The consul appends a list of cotton-goods importers at Tangier and other coast towns. The addresses can be obtained from the Bureau of Manufactures.]

TRINIDAD PURCHASES.

GREAT BRITAIN SUPPLIES BULK OF FABRICS.

Consul Wm. W. Handley reports from Trinidad that the textile fabric imports from Great Britain into that West Indian island for the year ending July amounted to \$873,000, besides over \$18,000 worth of cordage and twine. Canada supplied a like amount of cordage and twine, and America \$7,378 worth. The duty on these articles is 5 per cent ad valorem. American sales of textile fabrics in the island amounted to \$142,000. Most of the cotton duck comes from the United States, and is used for sails, awnings, etc. The American goods often arrive in damaged condition, which the dealers in Trinidad think could be easily remedied. [A list of the principal importers of cotton goods furnished by Mr. Handley can be secured from the Bureau of Manufactures.]

GERMAN TRIMMINGS.

CHANGING FASHIONS CREATE DULL TRADE.

Vice-Consul F. M. Jaeger, of Annaberg, reports dullness in the trimming trade of that city, due to the fickleness of fashion. Some old and well-known houses have gone out of business because of the uncertainties attaching to the trimming trade in recent years. The demand for bags, belts, buttons, and beaded fringe for the last half of 1905 was good. The exports of buttons to the United States for the six months ended December 31, 1905, amounted to \$22,512; trimmings, \$185,480.

BRITISH WOOL TRADE.

GROWERS WORKING FOR HIGHER PRICES.

Consul Frank W. Mahin, of Nottingham, writes that, after a spell of remarkable activity during the spring and through June, the wool trade was relatively and unexpectedly quiet.

There was a sagging tendency, due to buyers holding off, presumably for lower prices. The natural result has been to throw a damper on the trade and to shake confidence in the future. On the other hand, woolgrowers are very uncompromising. They evidently feel secure, knowing that manufacturers are all busily engaged, are full of contracts, and must have wool. Outside the woolgrowers, also, despite the shaken confidence, a belief exists that a slump is impossible, and that as soon as the trade realizes the extreme improbability of lower prices for a long time to come activity will again set in.

American takings are reported unexpectedly small in July, which was one cause of the relative dullness. The American attitude is considered to be a merely defensive one. That, in fact, is the attitude of manufacturers generally. They are holding off as long as possible and buying only what is absolutely necessary in the hope of a drop in prices. With woolen mills everywhere busily engaged, the consumption needs of the world are very great, and there are no accumulation of stocks of wool. These conditions are well understood by woolgrowers, and they are expected to govern themselves accordingly. At the same time it is not believed that prices will go higher, only that the status quo is likely to be substantially maintained during the remainder of this year.

TRANSPORTATION..

RAILROADS AND SHIPPING.

INDIA.

GROWTH AND EARNINGS OF THE EMPIRE'S STEEL LINES.

Consul-General W. H. Michael, of Calcutta, sends a report on India's railroads. It indicates a movement that shows that China and Japan are not to be alone in the great work of building up the East. The report deals with many important features of the Indian railroad world.

At the end of April, 1906, the number of miles of railroad in operation in India was 28,617, and the number under construction and sanctioned was 3,297. The number of miles of standard gauge, 5 feet 6 inches, is 15,399; miles of meter gauge, 3 feet 3½ inches, 12,098; miles of 2 feet 6 inches gauge, 1,097, and miles of 2 feet gauge, 328.

The total outlay on construction, including miscellaneous items, is S 1,222,848,000,10.^a The amount authorized to be expended for 1906-7 is S 50,000,000,00, applied as follows: For open lines, including S 12,000,000 for rolling stock, S 29,436,000,00; for lines under construction begun prior to 1905-6, S 12,040,000; begun during 1905-6, S 5,214,000; for lines to be begun in 1906-7, S 3,310,000,00, making a grand total of S 50,000,000,00. This amounts to an increase of 20 per cent over the previous year.

ADDITIONS TO ROLLING STOCK.

In 1905 256 engines, 370 coaches, and 2,861 box cars, or, as they are called in India, "wagons," were added to the rolling stock, and orders have been made for the construction of 511 engines, 2,223 coaches, and 6,700 box cars. In addition to this, 47 engines, 75 coaches, and 2,248 cars have been authorized since January 1, 1906. The number of engines that have been supplied with automatic brakes is 3,016; coaches supplied, 11,201; cars supplied, 3,798, leaving 2,799 engines, 9,061 coaches, and 107,226 cars unsupplied. The number of coaches and other cars fitted with gas is 9,782 and with electricity 648.

There are 79 stations provided with instruments for signaling trains automatically between stations, and 180 stations are fitted with apparatus for "interlocking points and signals. The lines, both state and company, are endeavoring to increase the facility for communication between passengers, guards, and drivers, which meets with popular approval.

^a Amounts in articles are stated in rupees, a rupee being worth 32.4 cents. The first sum, for example, equals \$396,202,752.

The gross earnings of all Indian railways during the calendar year 1905 amounted in round figures to \$ 137,544,000, an increase over the previous year of 1904 of \$ 6,699,000. The net earnings for the year amounted to \$ 71,742,000, which was nearly 6 per cent on the capital outlay.

The passenger traffic was greatly increased by the visit to India of the Prince and Princess of Wales, which drew thousands of natives to railroad points. There was a noticeable increase in the number of pilgrims, native marriage parties, visitors to fairs, etc., carried by railways. The total number carried was 248,000,000, the earnings therefrom amounting to \$ 42,009,000,27. The number of third-class passengers carried was 19,000,000, and the earnings therefrom \$ 2,607,000.

The average rate charged to passengers of all classes was a trifle more than one-fifth of an English penny, or 2.47 pies, or 0.42 of a cent, and the average distance traveled was 40 miles.

The Northwestern (State) Railway earned 20 per cent, and the remainder was earned principally by the Great Indian Peninsula, Rajputana-Malwa, Bengal-Nagpur, and Bombay, Baroda and Central Indian railways.

FREIGHT CARRIED.

The goods carried during the year were about 55,000,000 tons, the receipts for which were \$ 88,110,002. This was an increase of over 2,900,000 tons over 1904, and an increase in receipts of \$ 3,333,000.

The total weight of the traffic in grain and pulse, cotton, raw and manufactured, coal, oil seeds, sugar, salt, and jute amounted to nearly 29,000,000 tons, and the earnings therefrom to \$ 56,496,000. The increase in earnings was \$ 3,333,000, and in freight over 1,000,000 tons. The commodities enumerated above comprised about 71 per cent of the entire traffic.

JAPAN.

GOVERNMENT STEP TO NATIONALIZE THE RAILWAYS.

Consul-General H. B. Miller, of Yokohama, reports a movement now well under way in Japan having for its object national control of the railroads of the country. He writes:

I have to report that of the seventeen railway companies in Japan to be purchased by the Government in accordance with the law relating to the nationalization of railways passed by the diet last session, the Government has announced that the following six railways will be purchased before the end of this year: Nippon Railway, 861.07 miles; Sanyo Railway, 405.62 miles; Kobu Railway, 27.65 miles; Hokkaido Colliery Railway, 207.51 miles; Nishinari Railway, 4.46 miles, and the Ganyetsu Railway, 49.36 miles.

The Kobu and Hokkaido Colliery railways will be taken over on October 1, the Nippon and Ganyetsu railways on November 1, and the Nishinari and Sanyo railways on December 1.

The following list shows the capital, construction expenses, and purchase price of the lines affected:

Names.	Capital.	Construction.	Purchase price.
	<i>Yen.</i>	<i>Yen.</i>	<i>Yen.</i>
Nippon	50,451,800	54,479,859	130,532,540
Sanyo	32,799,700	36,727,664	74,042,980
Kobu	3,265,000	3,318,219	9,729,020
Hokkaido	12,936,800	11,704,228	29,168,180
Nishinari	1,650,000	1,956,806	1,956,505
Ganyetsu	2,640,000	2,584,596	2,584,596

The total price to be paid out by the treasury is 248,013,821 yen (\$123,500,883). According to the law, this money is to be paid in the form of state bonds bearing 5 per cent interest, and the bonds are to be handed over within five years, counted from the date of purchase.

RUSSIA.

TRANSFER OF USSURI LINE TO CHINESE EASTERN COMPANY.

Consul Roger S. Green reports from Vladivostok that the Ussuri Railroad, built and operated by the Russian Government, will be placed under the management of the Chinese Eastern Railway Company under terms not yet made public.

It was realized that a much better and more economical through service could be given if these two links in the trans-Siberian route were under a single administration. Hitherto the 144 miles of the Ussuri Railway, connecting the 920 miles of the Chinese Eastern Railway section across Manchuria with the sea, have been managed quite independently, making it difficult to organize a cheap and efficient through service, which both the railroads and the country need. An independent road like the Chinese Eastern may be better able to attract shippers and to foster promising new industries. As the whole Ussuri road is surrendered, the Chinese Eastern Railway gets also the line from Nikolsk to Habarovsk, 408 miles in length, which connects Vladivostok with the Amur River.

The construction of an Amur railroad between Stretensk and Habarovsk appears now to have been definitely placed on the Government's programme for the near future. Telegraphic reports state that the commission of the railway department recommends the immediate undertaking by the Government of the construction of the section from Stretensk, the present terminus of the trans-Baikal branch line from Karymskaya, to the confluence of the Shilka and Argun rivers at Pokrofka, a distance of about 240 miles. It is estimated that this will cost about \$22,000,000.

TRANS-SIBERIAN PASSENGER SERVICE HAS BEEN RESUMED.

Consul Greene also furnishes valuable information regarding railroad rates, conditions of travel, etc., on the overland route to Vladivostok from St. Petersburg and other Russian cities. He writes:

Passenger service by the trans-Siberian route having been resumed, first by one weekly express, and, since July 6, by a second, travelers

can now make the journey from Vladivostok to Moscow in eleven days and a half with only one change of cars—at Irkutsk. The trains leave Vladivostok on Mondays and Fridays at 8.03 a. m., connecting with the weekly mail steamers of the Russian East Asiatic Company from Japan and China.

Both first and second class cars give comfortable accommodations, the former being divided into compartments of two berths, while in the second-class compartments there are four berths. In the dining car attached to each train a table d'hôte dinner is served in the middle of the day for 1.50 rubles, about 77 cents, while in the morning and evening dishes meals may be ordered à la carte.

The rates from Vladivostok, including cost of berths, are as follows:

	First class.	Second class.
Harbin	\$22. 21	\$13. 87
Irkutsk	70. 57	44. 88
Moscow	132. 65	86. 91
St. Petersburg	138. 42	90. 62

BAGGAGE REGULATIONS.

Only 54 pounds of baggage may be checked free of charge by either first or second class passengers. For excess baggage the charge is \$1.38 per 9 pounds to Moscow, and \$1.42 to St. Petersburg. Very large pieces can be carried in the sleeping cars, provided they are in the form of valises, etc.; and there are numerous racks in the corridors and elsewhere in which they can be kept out of the way. The baggage of western-bound passengers is examined at the station "Manchuria," and that of eastbound passengers at Pogradichnaya, or, if desired, at Vladivostok. Hitherto these examinations have caused little inconvenience.

COLOMBIA.

AMERICANS SECURE TROLLEY FRANCHISE.

Minister John Barrett, of Bogota, reports the concession of a right to build a railway in Bogota, to American capitalists. He writes:

The government of the capital district of Bogota has just granted an important and valuable concession, extending over a period of sixty years, for an electric tramway or street-car franchise, with exclusive rights, to the streets of Bogota and the roads of the district.

This company, incorporated under the laws of New Jersey, and known as the Bogota Street Railway Company, has held a franchise for some years in this city which would expire in the comparatively near future. The service is now with mules, but the new franchise calls for electric or other means of more rapid transit. In view of the large amount of money that must be invested to make the necessary changes and improvements, the company sought a new franchise covering a long period, which has been granted. Next to the Buenaventura-Cali Railway concession recently granted to the Messrs. Mason of New York and Chicago, this is the principal franchise granted to Americans during the past year.

MEXICO.

ANOTHER LINE OPEN TO TRAFFIC.

Consul-General A. L. M. Gottschalk reports from Mexico City as follows:

The Mexican Central Railroad made announcement sometime ago that on September 2 the new extension known as the Saltillo division would be open for traffic. It is 71 kilometers (45 miles) long and will furnish a large section of the country with transportation facilities to Monterey and other points. Connections will be made with the line to Tampico and with the Coahuila and Pacific Railroad, now a division of the Central. Under the time-table adopted two freight and two passenger trains, one first-class and one second-class, respectively, are run daily in each direction.

SYRIA.

RAILWAY EXTENSION COMPLETED.

A Beirut special to the London Times states that the extension of the railway line from Hamah to Aleppo has been completed and direct communication is established with Beirut. The line joins the Damascus-Beirut Railway at Rayak. The distance between Rayak and Aleppo is 332 kilometers (206½ miles). The line will be opened to traffic toward the end of October.

BRITISH SHIPPING.

THE OWNERS ASSERT THAT THEY DO NOT FEAR GERMAN COMPETITION.

The statement recently printed in Daily Consular and Trade Reports from Consul-General Robert P. Skinner, of Marseille, as to the shifting of sea power in the Mediterranean, did not please some of the British publications. The London Standard says that the statement "is ridiculed by the leading shipping companies of England," and adds:

German competition is not feared by them. One of our representatives had interviews yesterday afternoon with the managers of some of the principal steamship lines whose business lies in the Mediterranean and the East, and they were unanimous in their agreement that there was no cause for anxiety. "Ever since Germany became a nation," said one official, "we have had to face her competition, and we have done so successfully. Of course, we would prefer not to have any competition, but there is room for us both. As a matter of fact, we fear German competition less now than formerly. When some years ago the North German Lloyd and the Hamburg-American companies started their service of steamers, like all new things they attracted attention. Shippers sent their cargoes by their lines, and passengers traveled by their steamers as an experiment. It was something new, and it was worth trying. Now, however, we are gaining back both passengers and cargoes. The German passenger traffic with the Mediterranean is nothing to the British. As regards cargo, they do not compete at all in the Mediterranean, but their presence is noticeable in the East and Australia. With regard to the statement that our power is declining, the last two ships which the Germans have put on their Mediterranean service were purchased from the Union-Castle Company, who sold them because they were found unsuitable for their traffic."

The British shipping companies could hardly be expected to admit that they have any fear of German competition in the Mediterranean or anywhere else. But Consul-General Skinner's remarks in a recent report on that point were founded on facts, and it is useless for the British companies "to ridicule" the facts, as the London Standard

asserts that they do. The large subsidy paid to the Cunard Line, and the loan of money at low rates of interest to build new ships, was proof enough of the British fear of the German lines, which are favored by aid from their Government.

MANCHESTER SHIP CANAL'S INCREASED TRAFFIC.

The half-yearly statement of the Manchester Ship Canal, forwarded by Consul Wm. H. Bradley, shows another advance in tonnage of merchandise reaching Manchester from oversea, as well as a large increase in net revenue.

The chief feature of the statement is the growth of sea-borne traffic. This was under 1,700,000 tons for the first six months in 1903, under 1,750,000 tons in the 1904 period, 1,865,000 tons in the 1905 period, and this year has risen to 2,112,000 tons for the first six months. To handle this increased tonnage has only increased the ordinary working expenses \$26,435. The engineering department reports rapid progress in the work of deepening the waterway to 28 feet from the ocean.

GERMANY AND ASIA MINOR.

IMPORTANT LINE TO THE PERSIAN GULF.

Consul E. L. Harris, of Chemnitz, calls attention to a European movement to secure better transportation facilities to and from the Persian Gulf and other eastern ports. He writes:

The Hamburg-American Line has announced its intention of establishing a new line of steamers between Hamburg and the Persian Gulf, with calls at the chief intermediate ports of the Mediterranean. This new enterprise is unquestionably intended to work hand in hand with the German overland railway route from Haidar Pascha, on the Bosphorus, to Basra, on the Persian Gulf, which will be completed in about two years. The increased competition which German steamship lines are meeting with in every part of the world is gradually forcing the managements to seek out every possible nook and corner which presents a fair prospect of business. The announcement that a Japanese line will soon be coasting between Yokohama and the Straits Settlements, touching at all intermediate ports of importance, can only be attended with serious results to German and English lines.

The new steamship line between Hamburg and the Persian Gulf will achieve one important result from the beginning, namely, it will cheapen freight rates. From day to day Asia Minor and Mesopotamia are presenting an ever-increasing field for the commercial activities of England, France, and Germany. Each country either owns railways already or concessions have been secured to build same as soon as practicable. England built and owns the line from Smyrna to Diner, with right of concession to complete it to Konia. The one from Smyrna to Karahissar is under French management. These railway enterprises have created almost unlimited markets for everything along the line of railway supplies, not to speak of the possibilities connected with the demand for building materials in the towns and villages along the different routes. Judging from the German and French schools existing in many towns of Asia Minor, tradesmen of these nations are beginning to locate in some numbers there.

WATERWAYS.**RUSSIAN STEAMSHIP SUBSIDIES.****REMARKABLE EFFORTS TO SECURE EFFECTIVE TRANSPORTATION.**

Russia, according to Commercial Agent R. S. Greene, of Vladivostok, seems determined to do all in her power to recuperate her Oriental trade and to advance her commercial interests in the Eastern World. To this end she has been systematically at work granting subsidies to lines of steamships plying between her own ports and those of China, Japan, and other ports of Asia. Consul Greene writes:

Contracts have been made this year by the Russian Government for subsidized steamship services from Vladivostok to ports of China and Japan and also along the coast to Nikolaiefsk, Petropavlovsk, and way ports. The contract for the China and Japan lines is for one year and was given to the Russian East Asiatic Steamship Company, which is closely connected with the Danish East Asiatic Company. It provides: First, for a weekly mail and passenger steamer from Vladivostok to the Japanese port of Tsuruga, which lies to the southeast on the Japan Sea. This trip is scheduled to be made in thirty-eight hours, and from Tsuruga, Kobe, and Osaka can be reached by train in eight hours, and Tokyo in fourteen hours. Secondly, for a weekly mail-and passenger steamer from Vladivostok to Shanghai via Nagasaki and back by the same route. The voyage from Vladivostok to Nagasaki takes about fifty hours and the whole run to Shanghai about four days. Thirdly, for a freight and passenger line from Vladivostok to the ports of Gensan, Fusan, Nagasaki, Chemulpo, Shanghai, Chefoo, and Dalny and return, sailings to be once in two weeks.

SPEED AND OTHER PROVISIONS.

It is provided that the speed of the mail and passenger steamers must be not less than 13 miles an hour, and of the freight and passenger steamers not less than 10 miles an hour, and it is stipulated that the sailings must be timed to give good connections with Russian and foreign railroad and steamship lines as the Russian Government may direct.

The chartering of foreign steamers is allowed. Mail steamers must have accommodations for 80 first-class and 300 third-class passengers and a cargo capacity of 1,500 tons. The freight steamers must accommodate 25 first-class and 200 third-class passengers and be able to carry 1,500 tons of cargo. Russian mails and mails from foreign ports for Russia are to be carried free, as well as the postal clerk to sort them, but the clerk is to be charged half the regular rate for his board. When so ordered by Russian diplomatic or consular officers, the vessels must carry free Russian subjects found abroad in a destitute condition, but not more than five on each steamer. Freight and passenger rates are not to exceed a maximum approved by the department of commerce and industry.

For delay in departure or arrival the mail steamers are subject to a fine of \$25 an hour and the freight steamers to a fine of \$12.50 an hour. If the delay is caused by inopportune acceptance of cargo or by touch-

ing at a port not indicated in the schedule, the fine is to be doubled. For leaving a port before the scheduled time a fine of \$500 is to be imposed on the mail steamers and of \$250 on the freight steamers. The fines for omitting the whole or part of a voyage are respectively \$2,500 and \$1,250 for the two classes of steamers. If delay is due to fogs, storms, lateness of express trains, or other reasonable causes, no fines are to be imposed. Moreover, if on account of late departure from one port the sailings from succeeding ports should also be delayed, only one fine is incurred, though efforts should be made to make up time lost.

If the company fails twice to complete a voyage, the Government may cancel the contract, transfer the business to another company, impose a fine of \$25,000, and cancel all obligations of the Government to the company.

SUBSIDIES TO COAST LINE COMPANIES.

The Russian East Asiatic Steamship Company also has a contract for a coasting line between Vladivostok and Nikolaiefsk, with stops at six ports each way. Fourteen voyages must be made during the present season. A speed of 10 miles an hour and a cargo capacity of 1,000 tons are required for the vessels employed, which may be under a foreign flag. Maximum freight and passenger rates are fixed, and it is provided that troops shall be carried at half rates. Government mails and couriers are to be carried free. Fines are to be imposed of \$125 for a day's delay in arrival or departure from a port, of \$250 for leaving port before the appointed time or for omitting any port, of \$750 for omitting a voyage or any part of it, and of double the amount for a second offense. If a steamer is held by the Government, \$125 must be paid for each day, Sundays excepted.

The subsidies to be paid to the Russian East Asiatic Steamship Company for all these services have been kept secret, but it is said that they amount to about \$375,000 for the year.

A third contract has been made with the Russ Steamship Company for a line from Vladivostok to the ports of the Okhotsk and Bering seas, the Commodore Islands, and the Chukotsk Peninsula. During the present season four voyages are to be made, aggregating nearly 28,500 miles. The steamers must have a speed of not less than 8 miles an hour and a cargo capacity of not less than 1,000 tons. Foreign steamers may be used. The subsidy in this case is fixed at \$107,500 for the four voyages, including one trip from Petropavlovsk to the mouth of the Anadir River. Delay in leaving port renders the company liable to a fine of \$125 for each day lost, while the Government is obliged to pay the company the same amount if it holds a steamer. For failure to call at an appointed port the company is to be fined \$2,500, while if a ship does not return to Vladivostok within five days of the scheduled date a fine of \$125 is incurred for every succeeding day of delay. Government mails and couriers are to be carried free, and maximum rates are fixed for freight and passenger charges.

LINE BETWEEN ODESSA AND NEW YORK.

Vice-Consul Smith, writing from Odessa, rejoices in the fact that a new steamship line is to put steamers on between that port and New York. This will do much to facilitate trade between the United States

and Black Sea ports, possibly adding Levant and Mediterranean ports. Mr. Smith writes:

Owing to the initiative of A. Rzhevuski, director of the Russian Steam Navigation and Trading Company, that company is about to institute a direct passenger and goods carrying line between Odessa and New York with steamships fully equipped for the transportation of emigrants. A steamer will leave the latter part of September.

The duration of the voyage from Odessa to New York will be twenty days. The steamers will leave periodically. During the present year it is contemplated to send two steamers. Thereafter communications with America will be resumed in the spring of next year.

ALL-WATER ROUTE FROM METZ TO ANTWERP.

Consul Walter Schumann, of Mainz, advises that the work of enlarging the canal in Lorraine as far as the junction with French territory is now completed, so that in the north it will join the Belgian Canal.

Barges and other craft will now be able to travel between Metz and Antwerp, which will be of immense value to mid-European traffic. A company is now in course of formation, with a capital of \$600,000, for the purpose of canalizing the Moselle from Metz as far as the industrial basin of Rombas-Hayange-Aumetz la Paix, the center of which is Thionville, the object of this being to open up this mineral district to the sea via Antwerp.

PORTUGUESE SHIPPING.

MARITIME MOVEMENT TO FAVOR NATION'S VESSELS.

Consul M. Blake, of Funchal, thinks that Portugal is going to inaugurate measures for confining the trade with its colonies to Portuguese ships, thus following the example of others. Formerly Portuguese ships could hardly hope to cope with others in the trade of the Azores, but with Portuguese ships plying between European and West African ports new possibilities arise in connection with the Azores. The trade of Madeira amounts to \$3,500,000 a year, of which two-thirds is imports, and the most of this is coal from England and cereals from America. Just how Portuguese ships are to get hold of the import-carrying trade does not appear, unless by laws prohibiting foreign ships to engage in it—a step that Portugal is hardly liable to take, particularly as her present relations with England are of the friendliest.

PREFERENTIAL FREIGHT RATES.

ENGLISH EXPORTERS DISTURBED OVER GERMAN SHIPPING ADVANTAGE.

According to Consul Albert Halstead, of Birmingham, the preferential freight rates granted by the Government railways of Germany affect seriously the export trade of the United Kingdom, and also give German exporters an advantage over American exporters in competitive countries. He writes:

Because of the large amounts of hardware, fancy goods, manufactures of iron and steel, and other articles, which Germany makes similar to those manufactured in the Midlands of England, the Birmingham district feels this freight-rate preference, because manufacturers here have no like treatment at the hands of the British railways. The subject has just attracted additional attention through the following from the Iron and Coal Trades' Review, showing the extension of preferential freight rates to a line of steamers sailing from Bremen:

We have had occasion to mention in previous issues the extraordinary low through rates from German places of manufacture, by rail and sea combined, to the Levant and Black Sea ports via Hamburg, and the establishment of a special set of through rates for Smyrna and Alexandria only at the beginning of last year. The effect of these through rates is that the sea traffic is worked at the expense of the German State railways, which receive almost nothing for hundreds of miles of conveyance. The system was extended this year by an arrangement with the German Atlas line sailing from Bremen. There is a general tariff for all goods similar to that via the Hamburg-Levant route, and also a similar tariff for iron and railway material to Smyrna and Alexandria only. It needs no sage to perceive that the object of these tariffs is political as well as commercial. No doubt a principal object is to secure a hold on the Anatolian railways and the new Turkish line now under construction between Damascus and the Hedjaz and ultimately Hodeidah, together with the inevitable junction sooner or later with the Egyptian railway system, by way of Suez and Akaba.

As the rates are founded on the distance of inland towns from Bremen, the great Westphalian district, more important by far in respect of its exports than all the rest of Germany, has an advantage, ranging up to about 48 cents per ton, according to the position of the place. There is, of course, a similar advantage in the Smyrna and Alexandria tariff, so that iron and railway material from Essen and the iron district will now cost via Bremen from 24 to 36 cents per ton less than via Hamburg. These goods are divided into four classes for the purposes of this new tariff. Class A, besides most heavy irons, includes railway trucks and carriages, whether mounted or not; the highest, D, is for locomotives and parts. Conveyance from Essen to Smyrna and Alexandria costs \$3.94 per ton, all through, or less than it would cost in some cases to get it merely to the port of shipment in England. By the Hamburg route the charge is \$4.26, the highest iron class costing but \$6.57 per ton by Bremen, and \$6.88 by Hamburg.

From Frankfurt and district rates are about 24 cents less by the Bremen than by the Hamburg route. It may be said that these are not very important differences; but what is important is that the German railways must carry the goods over 200 miles for about \$1.22 per ton, whereas in England it costs from twice to four or five times as much to carry it 100 miles. Whatever fault Germany commits she knows how to foster her export and manufacturing trades, and if we add to this almost free carriage the trade export bounty on finished iron of \$4.87 per ton, it is clear that English engineers and iron manufacturers have a great deal to compete with in frustrating German aims at Eastern markets.

AUTOMOBILE AMBULANCE IN MUNICH.

Consul-General William F. Wright reports from Munich that the Ambulance Brigade of Munich has just received an automobile ambulance which seems to give satisfaction.

The body of the car has a covered top, and a four cylinder 18 to 22 horsepower motor engine furnishes the power. The body is so arranged that the stretcher is carried on one side, with seating places for three persons on the other. By a simple arrangement the carrier for the stretcher can be hooked up, making the car into an ordinary six-seated omnibus. There are also two additional seats, one at the front and one at the back of the interior of the car, and all of the seats are so arranged that the attendants can see the patient while he is in the ambulance.

TARIFFS.
NEW REGULATIONS.
AUSTRALIAN COMMERCE ACT.

LATEST DECISION REGULATING GOODS FOR IMPORT.

The provisional regulations just issued by the Australian minister of trade and customs is forwarded by the consul-general, John P. Bray, of Melbourne, on which he comments:

Our manufacturers and exporters should carefully note that these compulsory descriptions to be applied to imports into Australia are limited to the goods specially mentioned in the regulations, and that they are to take effect on January 1, 1907. In the case of all other imports not mentioned in the regulations it must be borne in mind that while the act does not require them to be described it provides that if any description is voluntarily applied to them it must be true in every particular, and must not contain any suggestion that would mislead an ordinary person in any matter relating to the goods. The regulations follow:

TRADE DESCRIPTIONS OF IMPORTS.

5. (1) The importation of the goods enumerated in this regulation is prohibited unless there is applied to the goods a trade description in accordance with this part.

(2) The goods to which this regulation applies are as follows: (a) Articles used for food or drink by man, or used in the manufacture or preparation of articles used for food or drink by man; (b) medicines or medicinal preparations for internal or external use; (c) manures; (d) apparel (including boots and shoes), and the materials from which such apparel is manufactured; (e) jewelry; (f) agricultural seeds and plants.

6. (1) The trade description to be applied in accordance with this part shall comply with the following provisions: (a) It shall be in the form of a label or brand affixed in a prominent position to the goods, or to the coverings containing the goods; and (b) the label or brand shall set out in legible characters a true description of the goods, and the name of the country or place in which the goods were made or produced; and (c) in cases where any weight or quantity is set out the label or brand shall specify whether the weight or quantity so set out is gross or net.

(2) In the case of the following goods, the trade description shall, in addition, comply with the following provisions: (a) In the case of medicines prepared ready for use and containing 10 per cent or more of ethyl alcohol, if the average dose recommended exceeds one teaspoonful (60 minims), the trade description shall set out the proportion or quantity of alcohol in the medicine. (b) In the case of medicines prepared ready for use and containing any of the following drugs (or the salts or derivatives thereof), viz: Opium, morphine, cocaine, heroin, stramonium, nuxvomica, cannabis indica, bromides, sulphonal, trional, veronal, paraldehyde, or any synthetic hypnotic substance, phenazonum, phenacetinum, or acetanilidum, or any allied synthetic substance, chloral hydrate, belladonna, cotton root, ergot, or any abortifacient, the trade description shall set out the names of all such drugs so contained. (c) In the case of manures, the trade description shall set forth the principal active constituent thereof. (d) In the case of articles of apparel, the trade

description shall state the nature of the principal material from which the article is made, and the term "wool," or any term implying that the material is all wool, shall not be applied to any such material unless it contains at least 90 per cent of pure wool. If the material contains wool, but less than 90 per cent of pure wool, the description shall also state the other substances contained in the material. (e) In the case of articles of apparel manufactured from materials containing wool, but not containing as much as 90 per cent of wool, the trade description shall set out the substances contained in the materials. (f) In the case of boots and shoes, the trade description shall set out the principal material from which they are made, and unless the soles are solid leather, without admixture or addition, the description shall state the fact, and nature of the admixture or addition. (g) In the case of leather containing any loading of any mineral or other weighting substance, the trade description shall state the name of the loading or other weighting substance contained in the leather and the percentage thereof. (h) In the case of articles described as gold, the description shall state the karat number indicating the proportion of pure gold in the article. (i) In the case of agricultural seeds, the description shall state the name of the seeds and their condition as to soundness, cleanness, and freshness. (j) In the case of plants, the description shall state the names of the plants and their condition as to freedom from or affection by any disease or pest. (k) In the case of milk, the description shall describe the milk as condensed milk, concentrated milk, dried milk, or condensed skimmed milk, as the case requires.

(3) This regulation shall not apply to small packets of seeds sent by post or to seeds imported otherwise than as merchandise.

JAPAN.

NEW PORTS OPENED TO IMPORTS.

By a revision of Japanese Imperial Ordinance No. 342, 1899, which will come into force on the 1st day of October next, the ports of Aomori and Muroran are open for importation of the following goods only:

(1) Beverages and comestibles, as mentioned in Group III of the import tariff of the customs tariff law. (2) Sugar confectioneries and sweetmeats, as mentioned in Group IV of the same tariff. (3) Furs, hides, and skins, as mentioned in No. 66 of the same tariff. (4) Oils, fats, and waxes. (5) Iron: T, angle, and the like; rails and fish plates for rails; bolts, nuts and washers, rivets and dog spikes (of iron). (6) Materials for building and bridge construction. (7) Mechanic's tools and parts thereof. (8) Locomotives and locomotive tenders and parts thereof. (9) Articles free of duty, as mentioned in Article VII of the customs tariff law.

DECISIONS ON PAPER AND LEATHER POUCHES.

Consul-General H. B. Miller sends from Yokohama a Japanese customs decision, as reported in the Japan Gazette.

In a protest filed by the Iwai Shokai, of Yokohama, who imported some paper on which the appraiser fixed duty at the rate of 1,163 yen (yen = 49.8 cents) per 100 kin under No. 292B of the tariff, the importers held that the article should come under No. 293, as the paper, called foolscap, is used as a kind of note paper. The paper was regarded by the authorities as a kind of printing paper, and the protest was rejected. Another decision was rendered against protestants L. J. Healing & Co., who were importers of "leather pouches," on which the appraiser ordered duty at the rate of 20 per cent ad valorem and 10 per cent war duty, under No. 497 of the tariff. The protestants held that as the goods constitute an accessory of machines

they should be assessed under No. 17 of the tariff. The protest was rejected on the ground that in substance of No. 17 it is provided for "the parts thereof," but it does not contemplate accessories.

THE TEXTILE FABRIC CONSUMPTION TAX.

The Tokyo Mainichi is urging the Government to abolish the consumption tax of 10 per cent ad valorem on all textile fabrics. This war tax has not brought in the expected revenue, owing to the large expense in collection. For this reason the Government, according to the Tokyo journal, is anxious to revise the system without decreasing the revenue.

INDIA.

PRINTING EQUIPMENT EXEMPTED.

The following from Consul-General Wm. H. Michael, of Calcutta, will be of interest to American manufacturers and exporters of printing machinery and materials:

In exercise of the power conferred by section 23 of the sea-customs act, VIII of 1878, the governor-general in council is pleased to exempt from import duty the undermentioned articles used for printing and lithographing purposes, namely: Roller molds, roller frames and stocks, roller composition, standing screw and hot presses, perforating machines, gold blocking presses, stereotyping apparatus, metal furniture, paper-folding machines, paging and numbering machines.

BAGGAGE OF PASSENGERS NOW FREE OF IMPORT DUTY.

The following rules forwarded by Mr. Michael affecting the baggage of passengers on steamships arriving at ports in India, exempting the same from customs duty, have just been made public by the Government:

1. Bona fide baggage of a passenger is exempt from duty when it accompanies him, does not form part of the cargo, and is not included in the manifest.

2. Bona fide baggage shall include wearing apparel and personal effects, provided that the articles are not for sale and are imported for the personal use of the passenger or for use of members of his family traveling with him, but it shall not include the following articles, on which duty must be paid in all cases: (a) Arms, ammunition and all other articles enumerated in schedule 2 of the tariff import schedule; (b) alcoholic liquor exceeding two quarts, perfumed spirit exceeding 1 quart, and all other articles enumerated in schedule 3; (c) cigars and cigarettes exceeding 100 in number, whether in opened or unopened boxes, and other tobacco exceeding 1 pound in weight; (d) pianos, pianolas, carriages, motor cars, and motor cycles; (e) articles for household use, such as furniture, pictures, carpets, glass, crockery, cutlery, and silver and plated ware, except such articles (other than furniture or carpets) as shall appear to the customs authorities to be imported in moderate quantity and to be required for the personal use of the passenger while traveling or immediately upon his arrival at his destination.

3. Notwithstanding anything to the contrary in rule 1, bona fide baggage landed at any customs port within one month, before or after

the arrival of a passenger in India, may, subject to the exceptions specified in rule 2, be passed free at the discretion of the collector of customs.

ECUADOR.

NEW TARIFF TAKES EFFECT NOVEMBER 1.

According to the new tariff of Ecuador, which is to go into effect November 1, imports are divided into 20 instead of 38 classes, with rates of duty ranging from 1 centavo to 25 sucres per kilo, instead of from 1 centavo to 60 sucres per kilo. The duty is to be levied entirely on gross weight. The surtaxes are to remain unchanged. Matches, cigarette paper, and gunpowder have been taken off the list of prohibited articles, as reported in the Daily Consular and Trade Report of August 16.

There will be comparatively few changes affecting the chief imports from the United States. Machinery for agriculture and other industries will continue to be admitted free of duty. The rates on flour, lard, compound butter, kerosene, carriages and parts, cotton cloth not separately mentioned, and many manufactures of iron and steel will remain unchanged. The duty on prepared skins for footwear is to be reduced from 20 centavos per kilo net to 10 centavos per kilo gross. Cotton knit goods will pay 25 centavos per kilo, instead of 30 centavos. Cotton garments, sewn, will pay 50 centavos per kilo, instead of 60 centavos. The duty on shoes of all kinds, except of rubber, will be raised from 1.20 sucre per kilo to 2 sucres. Perfumery of all kinds, such as toilet oils, cosmetics, etc., will pay 50 centavos per kilo, instead of 60 centavos. The duty on telephone and telegraph apparatus is to be 10 instead of 25 centavos per kilo. The duty on cotton-seed oil is to be reduced from 30 to 25 centavos per kilo. All articles not separately mentioned in the tariff are to pay 20 instead of 30 centavos per kilo. The export duties are to remain unchanged. The value of a gold sucre is \$0.487, and of a centavo the one hundredth part of a sucre.

VENEZUELA.

REDUCED RATES ON GYMNASTIC APPARATUS.

Consul James W. Johnson, of Puerto Cabello, transmits copies of a new regulation modifying the tariff and affecting the importation of gymnastic apparatus into Venezuela.

The gymnastic apparatus specified was previously classified, with duties levied according to the material entering into the construction upon which there was the highest tariff. Under the new regulation they will all be included in the fourth class, the duty on which is 75 centimos per kilogram (14.46 cents per 2.2046 pounds). This modification will not at all affect the duties on apparatus made of wood, of iron, or of elastic, these having been in the fourth class of the old schedule, but there will be a change in the duties on goods made of rope, of rubber, and of leather. According to the former classification rope goods were in the third class, and paid 25 centimos per kilogram (4.8 cents per 2.2046 pounds); rubber goods were in the sixth class, and paid 2.50 bolivars per kilogram (48.2 cents per 2.2046 pounds), and leather goods were in the seventh class, paying 5 bolivars per kilogram (96.5 cents per 2.2046 pounds).

There is reason to believe that under this more favorable tariff on rubber and leather goods of this kind, baseballs and other implements of athletic sports, which are so largely manufactured by American manufacturers, might be more generally introduced into Venezuela.

COLOMBIA.

SUGAR MACHINERY EXEMPTED.

The British foreign office is in receipt of telegraphic information that a decree has been issued by the Republic of Colombia, South America, exempting machinery for sugar refining from import duty.

HAITI.

PAYMENT OF DUTIES IN GOLD.

A cablegram from Minister H. W. Furniss, at Port au Prince, states that the President of Haiti has approved a new law, effective at once, providing that import duties will be payable in American gold or Haitian paper currency at 300 per cent. Half of the receipts are for Government expenses, balance for the retirement of paper currency.

COSTA RICA.

MACHINERY EXEMPTED FROM DUTY.

It is stated by the British foreign office that machinery for preparing coffee, sugar, starch, rice, and panelas (a kind of brown sugar), as also machinery for the manufacture of brooms, of vermicelli, and of beer has been exempted from customs duty on importation into Costa Rica for a period of five years.

TURKEY.

SOAP RESTRICTIONS RESCINDED.

The Turkish analyses restrictions on soap imports, recently reported by an American consul, fixing the maximum percentage of solids (sal soda and earthy matters) at 2 per cent and water 4 per cent, was taken up by the foreign Government representatives at Constantinople, who opposed the proposition.

According to the London Chamber of Commerce Journal, these restrictions were so opposed to the spirit and letter of the new Turkish regulations on chemical analyses of merchandise that the Porte was informed by the customs department that the restrictions asked could not be acted upon. The regulations exempt all foreign-made soaps from analysis, and therefore there is no restriction upon the quality of soaps imported into the country. In consequence of the notification made by the customs department the restrictions alluded to are not in force.

THE NETHERLANDS.

ORANGE AND LEMON PEEL FREE OF DUTY.

The minister of finance of the Netherlands has issued an order to the effect that fresh and dried lemon, melon, and orange peel, as also cut citrons (*Citrus medica*), may be imported free of duty, even if contained in sea or other salt water, provided that the percentage does not exceed 25 per cent.

MISCELLANEOUS.

FREE DENATURED ALCOHOL.

REPORT OF AMERICAN OFFICIALS.

INVESTIGATIONS IN EUROPE OF ITS COST AND USE—WHAT MAY BE EXPECTED IN THE UNITED STATES.

Internal-Revenue Commissioner Yerkes and Congressman E. J. Hill, of Connecticut, recently returned from Europe, where they made an examination of the working of regulations for free denatured alcohol in Great Britain, France, and Germany, and have furnished some interesting information on the subject.

Representative Hill says that, spurred on by the keenness of German competition, Great Britain has found it necessary to make much more liberal provision for the use of free alcohol than heretofore. Where a 10 per cent denaturant had been used formerly, only 5 per cent will hereafter be used, thus materially reducing the cost. Beside that, the cost of supervision, which has heretofore been thrown upon the consumer, will, under the terms of the bill, be hereafter paid wholly by the Government. The investigators also found that Australia had taken the matter up and that every probability exists for a law being passed very similar to that adopted by our Congress at its last session. France is paying a bounty of 5 cents a gallon on all completely denatured spirit. Mr. Hill says that in Manchester there are two large factories where denatured alcohol is being used in the manufacture of hats. At one factory the proprietor said that he paid from 30 to 32 cents per gallon for denatured alcohol. They bought their spirit on printed requisition forms and were under bonds to the Government for its proper use. A Government inspector came into the factory whenever he chose to do so. The manufacturers use the spirit, recover it, and redistill the product in their own factory and use it over again until it is used up. The only restriction placed upon them was that they were not allowed to sell either the original or recovered spirit, but aside from that used it as they pleased.

The mixture which was there used consisted of 90 per cent ethyl alcohol, 10 per cent methyl alcohol, with 3 per cent of benzine added. Under the provisions of the new law the 10 per cent of wood spirit will be reduced to 5 per cent. The benzine is not required to be added except where recovery and redistillation is practiced. Mr. Hill said that they had no trouble in buying completely denatured alcohol as freely as they could buy any other article kept for sale, and he thinks that the same freedom of use should be accorded to the hat and other manufacturers of the United States.

Mr. Hill tells of visiting an extensive establishment near London for denaturing alcohol. On the ground floor were four large iron tanks holding about 2,500 gallons each. On the next floor were 21 casks of spirit which had been brought under seal from the bonded warehouse. On the third floor were the wood-alcohol tanks, and on the fourth floor cans of methylated materials. On the fourth floor the covers to the wood-alcohol tanks were removed (these tank covers were flush with that floor) and the contents gauged and tested. The quantity to be put into the tanks on the first floor was run off through pipes connecting with the first-floor tanks and the upper tanks relocked. Then going to the second floor, each cask of the grain spirit was gauged and tested and the tank covers, which were flush with the floor, were removed and the casks of the grain spirit were run into the tanks below. The mixture was then stirred with long-handled wooden paddles and the tank covers replaced, and the material was ready for sale free of tax. The mixture was 10 per cent wood alcohol and 90 per cent ethyl alcohol made from molasses, and was what is known as the ordinary methylating spirit used for manufacturing purposes only and used under bond. The completely denatured spirit is made by adding to the foregoing three-eighths of 1 per cent of benzine.

Mr. Hill said one of the professors at the institution in Germany, known as the Institution of the Association of the United Alcohol Manufacturers, which is operated and maintained for educational purposes at the expense of the trust, referring to the statement prevalent in America that the use of alcohol in the internal explosion engine resulted in the corrosion of the metal, remarked that that was nonsense, and immediately took Mr. Hill into a distillery where a large engine had been in continuous use with alcohol for the past six years. He admitted, however, that they had not fully overcome the difficulties with regard to the use of alcohol in the high-speed automobile, but expressed entire confidence that it would only be a short time before that would be accomplished.

INDUSTRIAL RESULT OF THE COST OF ALCOHOL.

The strongest alcohol of commerce in the United States is usually 95 per cent alcohol, and the price varies from \$2.30 to \$2.50 per gallon, showing that the greater part of the cost is due to the revenue levied by the Government. The greater part of the 60,000,000 gallons of alcohol consumed in the United States is used in the manufacture of whisky and other beverages. The revenue tax prevents the use of alcohol to any great extent in the industries of the country. The bill passed at the last Congress, designed to promote the use of untaxed alcohol in the arts and as fuel, takes effect January 1, 1907. The first effect of free alcohol will be, it is said, to supplant the 12,000,000 gallons of wood alcohol which are used in the manufacture of paints, varnishes, shellacs, and other purposes. Another use that is expected of denatured alcohol is in the manufacture of certain products, such as dyestuffs and chemicals, which can not now be manufactured commercially in this country because of the high cost of alcohol, and which are imported largely from Europe. A very rapid development of the industry of manufacturing chemicals as a result of free alcohol

is looked for. In the production of alcohol there is always formed as a by-product a certain amount of fusel oil, which is very useful in manufacturing lacquers which are used on metallic substances, fine hardware, gas fixtures, and similar articles. The industries manufacturing these wares will undoubtedly receive a great stimulus as a result of cheaper fusel oil caused by the increased production of alcohol.

A SAFE FUEL.

The use of denatured alcohol as a fuel has yet to be fully developed. Although alcohol has only about half the heating power of kerosene or gasoline, gallon for gallon, yet it has many valuable properties which may enable it to compete successfully in spite of its lower fuel value. In the first place it is very much safer. Alcohol has a tendency to simply heat the surrounding vapors and produce currents of hot gases which are not usually brought to high enough temperature to inflame articles at a distance. It can be easily diluted with water, and when it is diluted to more than one-half it ceases to be inflammable. Hence it may be readily extinguished; while burning gasoline, by floating on the water, simply spreads its flame when water is applied to it. Although alcohol has far less heating capacity than gasoline, the best experts believe that it will develop a much higher percentage of efficiency in motors than does gasoline. Since gasoline represents only about 2 per cent of the petroleum which is refined, its supply is limited and its price must constantly rise, in view of the enormous demand made for it for automobiles and gasoline engines in general. This will open a new opportunity for denatured alcohol. Industrial alcohol is now used in Germany in small portable lamps, which give it all the effects of a mantel burner heated by gas. The expense for alcohol is only about two-thirds as much per candlepower as is the cost of kerosene. Even at 25 or 30 cents a gallon, denatured alcohol can successfully compete with kerosene as a means of lighting.

FOREIGN EXPOSITIONS.

BRITISH INDIA AND SPAIN SEEK TO AID AGRICULTURE.

The annual Indian Industrial and Agricultural Exhibition will be held in Calcutta early in December.

Although the scope of the exhibition, according to the Indian Trade Journal, is confined to articles of indigenous growth and manufacture, yet arrangements will be made for the exhibition of machinery and appliances of foreign manufacture which are likely to help and develop Indian industries. All communications should be addressed to the Honorable Secretary at the "Exhibition Office," 62 Bowbazar street, Calcutta.

The German consul in Madrid reports that an agricultural and industrial exhibition will be held during the month of September at Valladolid. Considerable activity is being shown in Valladolid and neighboring provinces in the direction of improving and modernizing agricultural methods.

According to a report from Consul William C. Magelsson, of Beirut, circulars were distributed throughout Syria calling attention to an industrial exposition which was to be opened on August 15, at Schweir, a summer resort in the Lebanon mountains.

A committee named by Mouzaffer Pasha, governor-general of the Lebanon, has for its duty to encourage the peasants and traders to exhibit their choicest products. Only Syrian industrial productions and domestic animals were planned to be shown, accompanied by a certificate of official source showing that they were not of foreign origin. The plan of the exhibits shows a division into eleven sections within the doors of a spacious building constructed for the purpose, and containing unique collections of the handicraft of the Syrian weavers, the silversmiths, the brass workers, and the inlayers of Damascus. The committee encourages the prospective visitors and exhibitors to wear the costumes peculiar to their respective districts, as this adds much to the interest.

The committee assumed the responsibility of arranging all exhibits and they will also assist in securing foreign orders for displayed articles. Prizes will be awarded on the anniversary of the Sultan's accession to the throne in order that the blessings of the day may be gained. The idea of this public exhibition originated with certain enterprising Syrians who have visited and traded in the United States and Brazil, and the managing committee counts a number of this class of men.

A COMBINATION FRENCH AND ENGLISH AFFAIR.

A Franco-British exposition relating to sciences, arts, and industries is to take place in London in 1908. The project was first proposed by the French Chamber of Commerce in London, and has received fine support, including that of the French Government. The Duke of Argyle recently presided over a meeting of Englishmen where the proposal to hold the exhibition was unanimously adopted.

AUSTRIAN FASHIONS EXHIBITION.

An international exhibition of fashions and a congress of fashions will take place next year in Vienna under the presidency of Oscar Von Hoefft, chairman of the Vienna Fashion Academy, and with the support of the Austrian minister of commerce and the mayor of Vienna. The exhibition will be held during March and April.

WORLD'S FAIR FOR SPAIN.

The proposal is under consideration by Barcelona, Spain, states a London publication, for the holding of an international exhibition there in 1910.

VARIOUS BRITISH EXHIBITS.

The proposed British South African exhibition will open in London on February 13 next and remain open till March 18, after which, if successful, will be removed to the greater provinces of Great Britain. The scheme has received the financial support of all the governments of the South African colonies. The management will be a state matter, consisting of an executive composed of a representative from

each colony, with the originator of the undertaking, Captain Bam, as chairman.

The seventeenth universal cookery and food exhibition of England will be held at the Royal Horticultural Hall, Westminster, from November 20 to December 1. There will be sections for foods and food products, cookery of all classes, and dining-room accessories.

A manufactures and industrial exhibition opens in Bristol on September 24 and continues for one month. It is proposed to include the display of the latest developments and inventions in the production and application of electricity.

RUSSIAN POULTRY SHOW.

The St. Petersburg Official Journal announces that a poultry farming exhibition will be held in Moscow from November 29 to December 7, and that exhibits are invited from foreigners.

JAPAN'S PROSPECTIVE FAIR.

The Japan Weekly Mail announces that the committee recently appointed upon the question of a national exhibition in Japan have decided that it shall be held in Tokyo in 1912, and that it shall be a dual affair, part foreign and part domestic. The estimated cost is \$5,000,000, one-half of which will be contributed by the Government. There will be fifteen principal halls and sundry smaller buildings, covering about 30 acres of the 250 acres allotted as a site.

GERMAN EXHIBITIONS.

An international exhibition of fine arts and horticulture will be opened at Mannheim, Germany, on May 1, 1907, on the occasion of the third centenary of the foundation of that town. Full particulars may be obtained from Herr Ritter, burgomaster of Mannheim.

Interest increases in the proposal for a world's fair in Berlin in 1912.

WORKINGMEN'S COMPANIES.

FRENCH PROPOSITION TO FOSTER COOPERATIVE INDUSTRIES.

A report from Consul John C. Covert, at Lyon, says that seventeen prominent members of the French Parliament have joined in introducing a bill to provide for workingmen's cooperative industrial companies.

The object is to "give to labor a larger share in the fruits of their work." It states that it has embodied in the bill the chief features of a number of other laws that have been introduced and passed at different times. Acts of organization shall be filed with the Chamber of Commerce; each cooperative society must consist of at least seven persons; the capital shall be stated in the act of organization, and it may be increased at any time by the paying in of more money or the addition of new members. But the capital can not be increased until

at least half the stock subscribed is paid in. No share can be less than 20 francs (franc=19.3 cents) nor more than 100 francs. The by-laws may prohibit the directors from selling any stock whenever one or more stockholders shall object to such a sale and any stockholders offer to buy such stock at a price fixed by the last inventory.

COOPERATIVE MANAGEMENT—GOVERNMENT EXEMPTIONS.

If a stockholder wishes to pay for his stock other than with money a committee will determine the value of his contribution. Productive cooperative companies must be governed by officers and boards of directors chosen from among their stockholders. Such stockholders are responsible to third parties only in proportion to their holdings. Directors and managers are not personally responsible for any debts contracted in the prosecution of their business for the company. The capital of the company may be diminished by the death or withdrawal of members. Whenever such a decrease amounts to half the original capital a meeting of stockholders must be called to wind up the concern, unless a majority of the stockholders can be induced to resume their membership and to renew their subscriptions of stock. Two meetings may be held for the purpose of inducing the members to reenter the fold before the dissolution becomes imperative.

An annual inventory and an investigation of conditions must be made by a committee of members or of third parties. A copy of this report must be furnished to every stockholder at least one week before the annual meeting of the board of directors. A member may have as many votes as he has shares in the company if so provided in the by-laws, but no member shall have more than five votes.

Government stamps usually affixed upon commercial paper and contracts, notes, etc., are not required of companies organized under this law, nor will they be subject to an income tax, except as it applies to persons having more than 2,000 shares of stock. No member can withdraw from a cooperative company without giving one month's notice, so that the members may discuss it in at least one meeting. If one or more members thus withdraw, he or they will be paid their share of the property of the company based upon the last inventory.

DISPOSITION OF PROFITS.

One-tenth of the net earnings shall be set aside every year as a reserve fund, but when that sum shall have reached a figure equal to one-half the capital stock it need not be continued. The maximum sum that can be paid to the board of directors and the managers is 15 per cent of the net earnings. A company organized under this law will not be permitted to enjoy its privileges if it employs outside workingmen without giving them a share of its profits. At least 50 per cent of its net profits must be distributed among such employees or the company will forfeit all rights under this law.

Farmers and farm hands may organize under this act for the purpose of selling stock or their produce, and such companies will be exempted from paying the special tax or license imposed by the government upon other companies transacting similar business. A violation of any of the requirements of this law works a forfeiture

of all rights granted under it. The law applies to companies of business men, workingmen, and farmers. The law declares that any business man, manufacturer, farmer, or company may admit his or their employees to a share in the profits without rendering them necessarily responsible for the losses of such company or person.

The income that may thus be given to employees will not be subject to an income tax, but if the workingman thus admitted to a share in the profits owns stock in the concern, the income tax will be assessed on him for whatever sum he receives as dividends on such stock.

GERMAN LABOR PROBLEM.

UNUSUAL ACTIVITY IN THE BUILDING TRADES.

Consul H. W. Harris, of Mannheim, writes that the *Deutsche Bergwerks-Zeitung* in a recent issue refers to an extraordinary scarcity of workmen now prevailing in the Rhineland and Westphalian districts of Germany, which surpasses that of any previous year.

This scarcity is noted not only in the iron, steel, and coal industries, for which these districts surpass all others in Germany, but in the building trades as well. The activity in the latter trades is especially noteworthy. It is stated that in all the cities of these regions old buildings are found to be inadequate for present demands and are giving way to large modern buildings, requiring thousands of workmen in their construction. Employees in the building trades are for the most part German citizens, while on public works, in mining, etc., large numbers of foreigners find employment, native labor being wholly insufficient to supply the demand.

Complaint is heard against the methods of agents through whom foreign workmen are induced to come to Germany, the claim being made that resort is had in some cases to false representations and improper inducements. The question of what is to become of this large foreign element should the present business activity subside is regarded a somewhat grave one.

EUROPEAN CEMENT ACTIVITY.

MARKED CHANGE IN TRADE CONDITIONS FROM LAST YEAR.

Stagnation in the Portland cement trade in 1905 has given way, states the *London Times*, to a decided improvement, both in Great Britain and the Continent of Europe.

Demand has fully overtaken production, prices have improved and are still tending upward, and manufacturers are accumulating unfilled orders. The San Francisco rebuilding needs created an unusual demand for cement, but before that there were unmistakable signs of recovery. During the year 1905 the total shipments from the United Kingdom to the United States amounted to 11,590 tons, and in 1904 to 5,073 tons, while for the seven months ended July 31 last they had already reached the comparatively large total of 60,932 tons. The total British exports in 1905 amounted to 456,558 tons, while the

exports for the first seven months of this year were 358,551 tons. The maximum annual production of Portland cement in Great Britain is estimated at about 3,000,000 tons.

Belgium exports annually considerably larger quantities of cement than Great Britain, the total for 1905 being 679,426 and for 1904 558,295 metric tons. For the first six months of this year the exports amounted to 380,556 tons. It is claimed on behalf of the Belgian exporters that by prompt action after the earthquake at San Francisco they secured the lion's share of the newly created business with that city.

ENGLAND VERSUS CONTINENTAL EUROPE.

But the export figures for the six months to the end of June show that the shipments from Belgium to America fall short of what was shipped from Great Britain, being 41,332 metric tons, against 49,540 long tons from Great Britain. It is estimated, however, that the orders yet to be shipped from Belgium during the twelve months ending next March amount to about 350,000 tons. The productive capacity of the thirteen syndicated mills in Belgium is about 700,000 tons per annum, and at the present time these mills are turning out a full production.

The German cement manufacturers have been the chief competitors with Great Britain in artificial cement, and for some time succeeded in wresting certain markets, the most pronounced success being with America. In 1902 the German exports to the United States amounted to 246,730 tons out of total American imports of 699,380 tons, but the home demand has been more largely met by local manufacture, which reduced the exports from Germany to 86,043 tons last year out of a total import of 617,891 tons. The recovery in the German cement trade is as clearly marked as in England, being helped by the extraordinary activity in the German building trades. The works of the several syndicates are being pushed to the full extent. The German exports for the first half of this year amount to 303,626 metric tons, of which 71,288 tons went to the United States, against 46,556 tons in the first half of last year.

IMPORTS AT NEW YORK.

ANALYSIS OF THE INCREASE DURING THE LAST FISCAL YEAR.

The collector of customs of the port of New York reports to the Treasury Department that an analysis of the import records of the New York custom-house for the fiscal year 1906 shows the most conspicuous increases of value to have been upon the kinds of merchandise, with countries of exportation, approximately as follows:

First division.—Hides of cattle from South America, British East Indies, France, Mexico, United Kingdom, Russia, China, Denmark, and Sweden, increase for the year \$8,500,000.

Rubber from Brazil, Mexico, Germany, and England; wood pulp and wood flour from Germany, Norway, Sweden, and Austria; waste gunny bagging and paper stock from Germany, Netherlands, England,

Spain, and France; reeds and rattan from Germany, India, and China; lumber and laths from Canada; crude bones from South America and Europe; total increase on above group of items, \$3,500,000.

Second division.—Precious stones and pearls from England, France, and Holland, \$7,000,000; paintings and paper, principally from England, \$1,500,000; postal-card albums, wall papers, and Christmas goods from Germany and England, \$1,000,000.

Third division.—Laces (Valenciennes) from Calais, France, \$3,000,000.

Fourth division.—White linens and housekeeping linens from Ireland and Scotland, \$2,500,000; Renaissance tidies from Japan, cotton tapestries from France, cluny lace tidies from Italy, \$500,000; cotton dress goods and white goods from Great Britain, France, and Germany, \$1,500,000; linen drawn work from Japan, burlaps from India, linens from Germany, cotton and flax wearing apparel from France, \$2,500,000; embroideries from St. Gall, Switzerland, laces from Plauen, Germany, \$3,000,000.

Fifth division.—Furs from Germany, \$4,000,000; hosiery and underwear from Germany, \$1,500,000; crude feathers from Africa, England, and France; artificial flowers and ornamental feathers from France and Germany; straw hats from South America, Italy, China, and Java, \$2,000,000.

Sixth division.—Woolen dress goods from England, France, and Germany; straw matting from China and Japan; shawls from England, Scotland, Germany, Austria, and Switzerland; vegetable fibers from Mexico, Italy, Germany, Nassau, and Philippine Islands; goat-skins from Arabia, South America, China, Africa, and India; wool from Russia, Australia, South America, Scotland, Germany, New Zealand, and England, \$6,000,000.

Seventh division.—Coal tar colors from Germany, Switzerland, and United Kingdom; pigments from Germany and United Kingdom, France, Belgium, and Italy; pumice stone from Italy and Germany; glycerin from France, Switzerland, Italy, and the Netherlands; medicine from China; essential oils from Germany, France, United Kingdom, and China; glue from France, Germany, United Kingdom and Belgium; gambier from East Indies, \$5,500,000.

Ninth division.—Structural steel from Antwerp, Belgium (duty 0.5 cent per pound); lead in pigs from Mexico (duty 2.5 cents per pound); tin in pigs from China (free), \$15,000,000; automobiles from France, \$1,500,000; marble, carved and in block, from Italy, \$500,000.

The total increase for the year on the lines above specified approximate in round numbers \$71,000,000, which is offset by decreases in the eighth and tenth divisions in coffee, cocoa, sugar, and various minor articles scattered through the lines passed by several different examiners, aggregating say \$14,000,000.

The total net increase in appraised values, approximating for the year, is in round numbers \$57,000,000.

WAR AGAINST TUBERCULOSIS.

BEHRING'S SERUM READY—GERMANY'S SUCCESSFUL FIGHT.

According to *Matin*, a Paris newspaper, Professor Behring is about to deliver to clinical surgeons his latest remedy against tuberculosis, which he calls "tulase." He recently communicated his discovery at Hamburg to an audience composed solely of members of the State institution. The professor can not say that the new remedy has been sufficiently tested to be put in the hands of ordinary practitioners, but clinical hospitals will receive it free of charge on demand. The new remedy is introduced into the system by subcutaneous injection or by swallowing.

Consul Schumann, of Mainz, reports that the city of Darmstadt has opened a museum devoted entirely to tuberculosis. It is hoped that by assembling together evidence touching the disease the public will be induced to pay greater attention to sanitary and hygienic rules, and thus help to combat its spread. The museum, by means of pictures, shows the symptoms of tuberculosis in every form, and also the means adopted by medical science to check them. It is intended to be a traveling exhibition, and will be taken through all the large centers of population in Germany, while a series of explanatory lectures will be delivered wherever it makes a halt.

As to what Germany has already accomplished in her fight against "the great white plague," Professor Pannewitz stated at the International Anti-Tuberculosis Congress at The Hague in September that in Germany the rate of mortality from tuberculosis had been reduced by one-third. The next Congress will be held either in Stockholm or Vienna.

OZONE FOR WATER PURIFICATION.

Various experiments are being made in Europe for purer water supply for cities, one of the most prominent being de Frise's system of employing ozone for the sterilization of water at Saint-Maur, near Paris.

The main facts of this process are contained in a report addressed by Doctor Miquel, chief of the micrographical service of the Mont Souris Observatory, to the sixth commission of the Paris municipal council. Experiments were undertaken with water filtered through sand at various speeds in order to test the extent to which the bacteria present were destroyed by exposure to air containing very slight admixtures of ozone. From 50 up to 100 cubic meters of filtered water were dealt with per hour, and each set of tests lasted for five hours. The filtered water in very many cases contained germs of the bacillus coli, but after the water had been subjected to the de Frise process these bacteria were invariably destroyed. These experiments confirm the results obtained in a previous set of trials carried on during the first three months of 1905. Doctor Miquel reports that the process has been found capable of eliminating a large proportion of the bacteria

present in water of various descriptions and of permanently destroying with certainty the germs of bacillus coli, which possess greater resisting power than the Eberth bacillus and the cholera spirillum. The cost of this treatment is stated, in dealing with large volumes, to be about 1½ centimes per cubic meter, say 1½ cents per 1,000 gallons.

MILITARY APPROPRIATIONS.

The military information division has issued the following memorandum on the comparative cost of the military establishments of England, France, Germany, Italy, and the United States.

Amount of appropriations for the year 1906-7.

[United States currency.]

	Army.	Fortifica- tions.
Great Britain	\$144,987,336	\$11,435,580
France.....	156,614,388	1,158,000
Germany.....	156,608,043	1,631,593
Italy	55,107,650	.....
United States	71,817,165	5,053,993

In foreign countries the items in the military budgets are divided differently from what they are in the United States, the item of fortifications generally appearing in the general appropriation for the army. Hence the first sum in the above table is the total amount appropriated, while the second is one of the items in the budget. Italy furnishes no itemized list, hence the appropriation for fortifications could not be ascertained.

PARCELS POST TO PERU.

Acting Postmaster-General Hitchcock has announced a parcels-post agreement with Peru taking effect September 1. Parcels may then be exchanged between the United States and Peru not exceeding \$50 in value, 11 pounds in weight, nor more than 3½ feet in length and 6 feet in length and girth combined. Mail containing packages for Peru will be made up at the post-offices in New York and San Francisco. This should prove a great convenience in trade with Peru.

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CONSULAR REPORTS.

The publications made up chiefly of reports from United States consular officers in foreign countries include the following:

- COMMERCIAL RELATIONS, being the annual reports of consular officers on the commerce, industries, navigation, etc., of their districts.
- REVIEW OF WORLD'S COMMERCE, being a summary of the annual reports contained in COMMERCIAL RELATIONS.
- DAILY CONSULAR AND TRADE REPORTS, issued daily, except Sundays and legal holidays, for the convenience of the press, commercial and industrial organizations, manufacturers, etc.
- MONTHLY CONSULAR AND TRADE REPORTS, containing miscellaneous reports from diplomatic and consular officers compiled from the daily.
- SPECIAL CONSULAR REPORTS, containing series of reports from consular officers on particular subjects, made in pursuance to instructions from the Department.

The above consular reports were until July, 1903, issued by the Bureau of Foreign Commerce of the State Department; from that date until June, 1905, they were issued by the Bureau of Statistics of the Department of Commerce and Labor, with which the Bureau of Foreign Commerce of the State Department was consolidated July 1, 1903; since July 1, 1905, they have been issued by the Bureau of Manufactures, Department of Commerce and Labor. For details of these publications, the subjects of which the special reports treat, and the reports remaining for distribution, address "Chief, Bureau of Manufactures, Department of Commerce and Labor, Washington, D. C."

The publication of the reports on special subjects, in separate form, was begun in 1890. Those of the following titles are now available for distribution:

- Vol. 2 (1890 and 1891).*—Olive Culture in the Alpes Maritimes.
- Vol. 15 (1898).*—Part I. Soap Trade in Foreign Countries; Screws, Nuts, and Bolts in Foreign Countries; Argols in Europe; Rabbits and Rabbit Furs in Europe; Cultivation of Ramie in Foreign Countries.
- Vol. 20 (1900).*—Part I. Book Cloth in Foreign Countries; Market for Ready-Made Clothing in Latin America; Foreign Imports of American Tobacco; Cigar and Cigarette Industry in Latin America. Part II. School Gardens in Europe.
- Vol. 23 (1901).*—Part I. Gas and Oil Engines in Foreign Countries. Part II. Silver and Plated Ware in Foreign Countries.
- Vol. 24 (1902).*—Creameries in Foreign Countries.
- Vol. 25 (1902).*—Stored Goods as Collateral for Loans.
- Vol. 26 (1903).*—Briquettes as Fuel in Foreign Countries.
- Vol. 27 (1903).*—Markets for Agricultural Implements and Vehicles in Foreign Countries.
- Vol. 29 (1904).*—Macaroni Wheat in Foreign Markets.
- Vol. 30 (1904).*—Emigration to the United States.
- Vol. 32 (1904).*—Foreign Markets for American Fruits.
- Vol. 33 (1905).*—Industrial Education and Industrial Conditions in Germany.
- Vol. 36 (1905).*—Foreign Markets for American Cotton Manufacturers.
- Vol. 37 (1905).*—Machine-Made Lace Industry of Europe.
- Vol. 38 (1905).*—Insurance in Foreign Countries.
- Reports of Special Agents:
 - Trade Conditions in Brazil.
 - Trade Conditions in China.
 - Trade Conditions in Cuba.
 - Trade Conditions in Japan and Korea.
 - Trade Conditions in Mexico.
 - Trade with China. Illustrated.

Of the MONTHLY CONSULAR REPORTS, many numbers are exhausted or so reduced that the Department is unable to accede to requests for copies. Of the publications of the Bureau available for distribution, copies are mailed to applicants without charge. In view of the scarcity of certain numbers, the Department will be grateful for the return of any copies of the monthly or special reports which recipients do not care to retain. Upon notification of willingness to return such copies, franking labels to be used in lieu of postage in the United States, the Philippine Islands, Hawaii and Porto Rico will be forwarded.

Persons receiving CONSULAR REPORTS regularly, who change their addresses, should give the old as well as the new address in notifying the Bureau of the fact.

In order to prevent confusion with other Department bureaus, all communications relating to CONSULAR REPORTS should be carefully addressed, "Chief, Bureau of Manufactures, Department of Commerce and Labor, Washington, D. C."

VALUES OF FOREIGN COINS AND CURRENCIES.

[As given by the Director of U. S. Mint and published by Secretary of the Treasury Oct. 1, 1906.]

COUNTRIES WITH FIXED CURRENCIES.

Countries.	Monetary unit.	Value in U.S. gold.	Coins.
Argentina	Peso	\$0.96, 5	Gold—argentine (\$4.82, 4) and $\frac{1}{2}$ argentine; silver—peso and divisions.
Austria-Hungary	Crown .....	.20, 3	Gold—20 crowns (\$4.05, 2) and 10 crowns; silver—1 and 5 crowns.
Belgium	Franc .....	.19, 3	Gold—10 and 20 francs; silver—5 francs.
Brazil	Milreis .....	.54, 6	Gold—5, 10, and 20 milreis; silver— $\frac{1}{4}$, 1, and 2 milreis.
British N. A. (except Newfoundland)	Dollar	1.00	
British Honduras	do	1.00	
Chile	Peso .....	.36, 5	Gold—escudo (\$1.825), doubloon (\$3.65), and condor (\$7.30); silver—peso and divisions.
Colombia	Dollar	1.00	Gold—condor (\$9.647) and double condor; silver—peso.
Costa Rica	Colon .....	.46, 5	Gold—2, 5, 10, and 20 colons (\$9.30, 7); silver—5, 10, 25, and 50 centimos.
Denmark	Crown .....	.26, 8	Gold—10 and 20 crowns.
Ecuador	Sucres .....	.48, 7	Gold—10 sucres (\$4.8665); silver—sucres and divisions.
Egypt	Pound (100 piasters)	4.94, 3	Gold—5, 10, 20, and 50, piasters; silver—1, 2, 5, 10, and 20 piasters.
Finland	Mark .....	.19, 3	Gold—10 and 20 marks (\$1.93 and \$3.85, 9).
France	Franc .....	.19, 3	Gold—5, 10, 20, 50, and 100 francs; silver—5 francs.
Germany	Mark .....	.23, 8	Gold—5, 10, and 20 marks.
Great Britain	Pound sterling	4.86, 6 $\frac{1}{2}$	Gold—sovereign (£) and half sovereign.
Greece	Drachma .....	.19, 3	Gold—5, 10, 20, 50, and 100 drachmas; silver—5 drachmas.
Haiti	Gourde .....	.96, 5	1, 2, 5, and 10 gourdes; silver—gourdes and divisions.
India	Pound sterling ^a	4.86, 6 $\frac{1}{2}$	Gold—sovereign (£); silver—rupee and divisions.
Italy	Lira .....	.19, 3	Gold—5, 10, 20, 50, and 100 lire; silver—5 lire.
Japan	Yen .....	.49, 8	Gold—5, 10, and 20 yen; silver—10, 20, and 50 sen.
Liberia	Dollar	1.00	
Mexico	Peso ^b .....	.49, 8	Gold—5 and 10 pesos; silver—dollar ^c or peso and divisions.
Netherlands	Florin .....	.40, 2	Gold—10 florins; silver— $\frac{1}{4}$, 1, and 2 $\frac{1}{4}$ florins.
Newfoundland	Dollar	1.01, 4	Gold—\$2 (\$2.02, 7).
Norway	Crown .....	.26, 8	Gold—10 and 20 crowns.
Panama	Balboa	1.00	Gold—1, 2 $\frac{1}{2}$, 5, 10, and 20 balboas; silver—peso and divisions.
Peru	Libra	4.86, 6 $\frac{1}{2}$	Gold— $\frac{1}{2}$ and 1 libra; silver—sol and divisions.
Philippine Islands	Peso .....	.50	Silver—peso, 50, 20, and 10 centavos.
Portugal	Milreis	1.08	Gold—1, 2, 5, and 10 milreis.
Russia	Ruble .....	.51, 5	Gold—5, 7 $\frac{1}{2}$, 10, and 15 rubles; silver—5, 10, 15, 20, 25, 50, and 100 copeks.
Spain	Peseta .....	.19, 3	Gold—25 pesetas; silver—5 pesetas.
Sweden	Crown .....	.26, 8	Gold—10 and 20 crowns.
Switzerland	Franc .....	.19, 3	Gold—5, 10, 20, 50, and 100 francs; silver—5 francs.
Turkey	Piaster .....	.04, 4	Gold—25, 50, 100, 250, and 500 piasters.
Uruguay	Peso	1.03, 4	Gold—peso; silver—peso and divisions.
Venezuela	Bolivar .....	.19, 3	Gold—5, 10, 20, 50, and 100 bolivars; silver—5 bolivars.

COUNTRIES WITH FLUCTUATING CURRENCIES. ^d

Country and monetary unit.	Jan. 1, 1906.	Apr. 1, 1906.	July 1, 1906.	Oct. 1, 1906.	Country and monetary unit.	Jan. 1, 1906.	Apr. 1, 1906.	July 1, 1906.	Oct. 1, 1906.
Bolivia:	Cts.	Cts.	Cts.	Cts.	China—Continued.	Cts.	Cts.	Cts.	Cts.
Silver boliviano	46.5	47.8	48.0	48.5	Mexican dollar .....	.....	.....	.....	52.6
Central America:					Nankin tael	75.5	77.5	77.9	78.6
Silver peso	46.5	46.5	48.0	48.5	Ningpo tael	73.3	75.3	73.9	76.4
China:					Newchwang tael	71.5	73.4	75.7	74.5
Amoy tael	76.3	78.3	78.8	73.0	Peking tael	74.3	76.3	76.8	77.6
British dollar .....	.....	.....	.....	52.3	Shanghai tael	69.6	71.5	71.9	72.6
Canton tael	76.0	78.1	78.5	79.2	Swatow tael	70.4	72.3	72.7	73.4
Chefoo tael	72.9	74.9	75.3	76.0	Takau tael	76.7	78.8	79.2	79.9
Chinkiang tael	74.5	76.5	76.9	77.6	Tientsin tael	73.9	75.9	76.3	77.0
Fuchau tael	70.5	72.4	72.8	73.5	Persia:				
Haikwan (customs) tael	77.6	79.7	80.1	80.8	Silver kran	8.6	8.8	8.8	8.9
Hankow tael	71.3	73.3	73.7	74.3	Straits Settlements:				
Hongkong dollar	50.2	51.5	51.8	52.3	Silver dollar .....	.....	.....	.....	52.8
Kiaochou	75.3	77.3	77.7	77.0					

^aThe rupee, \$0.3244 $\frac{1}{2}$, 15 to the sovereign, constitutes the money of account.^bSeventy-five centigrams fine gold.^cValue in Mexico, \$0.498.^dCoins of silver-standard countries are valued by pure silver content at average market price of silver for the three months preceding date of circular issued by U. S. Treasury Dept.

DEPARTMENT OF COMMERCE AND LABOR
BUREAU OF MANUFACTURES

MONTHLY
CONSULAR AND TRADE
REPORTS

NOVEMBER, 1906

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MONTHLY CONSULAR *and* TRADE REPORTS

Washington, D. C.

NOVEMBER, 1906

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EUROPE.

KINGDOM OF SPAIN.

SYNOPSIS OF NEW TARIFF RATES.

AMERICAN ARTICLES BENEFITED BY THE RECIPROCITY AGREEMENT.

Minister William M. Collier transmits from San Sebastian the translation given below of a royal Spanish order relative to the application of the rates of the second or minimum tariff to American products upon their importation into Spain in accordance with the provisions of the reciprocity agreement recently put into effect. The schedule of Spanish customs duties covering the chief products of import was published in Monthly Consular and Trade Reports for September.

For the application of the decree in the appraisement of the merchandise originating in the United States of North America, the following regulations have been issued:

I. All merchandise originating in the said country which is cleared in the customs on and after September 1 will be appraised upon presentation of the corresponding certificate whence it proceeds in accordance with the above-cited second tariff of the present customs rates, together with the reductions of the conventions now in force, whatever be the date of the arrival of the goods at Spanish ports.

II. The merchandise which is in warehouses must also be appraised according to the above-mentioned second tariff, the corresponding liquidations being rectified when the goods are taken out for consumption.

III. In the cases of rectification of liquidations, the necessary reductions will be made in the accounting books.

PRACTICAL BENEFITS.

WHAT THE NEW COMMERCIAL TREATY WITH SPAIN MEANS TO AMERICA.

Consul-General B. H. Ridgely, in an elaborate report from Barcelona, details American trade prospects as a result of the commercial agreement between Spain and the United States which went into effect

on September 1. American exporters who may see in the many advantages thus obtained for American commerce opportunities for marketing their products in Spain will do well to act promptly in reaching the market, as the agreement may be terminated at any time upon a year's notice. Mr. Ridgely continues:

By the terms of this new agreement Spain concedes to the United States the lowest scale of her new tariff. In other words, the United States are no longer to be discriminated against, as they have been heretofore in the absence of a treaty or other commercial *modus vivendi*. Once our excellent manufactured products are in general use here it will be difficult by any reasonable tariff to keep them out. It may be also stated in this connection that any concessions now existing or which Spain may hereafter make to any other country (except Portugal) during the existence of the agreement must also be conceded to the United States.

It is difficult to write with certainty as to the American products which will be immediately and practically benefited by the new arrangement, but among the very first of these would appear to be all sorts of machinery, including agricultural machinery, which has heretofore been discriminated against. Valves, joints, machine tools, files, tools for carpenters and cabinetmakers, and brick-making machinery, packing for machinery, casings, grease and oil cups, cheap watches of silver, gold, and other metals, and wood pulleys, steel pulleys, etc., are among the many articles which suggest themselves in the realm of machinery as being immediately salable if properly presented.

American agricultural machinery, as far as it is known, is much appreciated, but, as the American consular agent at Santander in the north of Spain observes, it must be pushed by energetic traveling salesmen. Agricultural machinery from the United States pays the same as from England, Germany, France, etc.; that is to say, 10 pesetas per 100 kilograms. Out of a total of 66,000,000 pesetas worth of machinery and tools imported annually into Spain, only about 2,000,000 (3 per cent) is credited to the United States. The new agreement should encourage our machinery exporters to work this market more vigorously.

ELECTRICAL AND IRON AND STEEL GOODS.

Dynamos, electric motors etc., not exceeding the weight of 400 kilos (880 pounds) will pay 75 pesetas (\$13.50) per 100 kilos instead of 100 pesetas (\$18); over 400 kilos, 37½ pesetas (\$6.75) instead of 50 pesetas (\$9). Telegraph and telephone fixtures 2.50 pesetas (45 cents) per kilogram instead of 3 pesetas (54 cents.) Arc lamps and parts for same, excepting the carbons, will pay 2 pesetas (36 cents) per kilogram instead of 4 pesetas (72 cents). Incandescent electric lamps 8 pesetas (\$1.44) per kilogram instead of 13 pesetas (\$2.34).

A substantial reduction is brought about in the duties of all kinds of iron and steel bars, rails, plates, etc. Cast and wrought iron and steel parts of machinery all benefit greatly by being now assessed on the same basis as if imported from European treaty countries. For instance, railway locomotive and wagon wheels from the United States will now pay 13 pesetas (\$2.34) per 100 kilograms instead of 20 pesetas (\$3.60). Carriage springs not made of wire will pay (per 100 kilograms) 11 pesetas (\$1.98) instead of 13 pesetas (\$2.34). Iron and steel wire, hitherto handicapped by the

NOTE.—The monetary conversions of the consul-general are based on the Spanish peseta at 18 cents American currency, presumably the present exchange value of the peseta. Import duties in Spain, however, are payable in gold, and the value of the gold peseta is 19 3 cents.—ED.

discriminating tariff, will now be able to compete with whatever small quantities of foreign wire are still purchased abroad. Screws and bolts between 5 and 10 millimeters in thickness are reduced from 40 pesetas (\$7.20) per 100 kilograms (220 pounds) to 32 pesetas (\$5.76); those of 5 millimeters in width and smaller are reduced from 45 pesetas (\$8.10) per 100 kilograms (220 pounds) to 38 pesetas (\$6.84).

Locks and keys are reduced from 75 pesetas (\$13.50) per 100 kilograms to 60 pesetas (\$10.80); same when made of several different metals, from 100 pesetas (\$18) to 75 pesetas (\$13.50). Metal fixtures for doors, windows, carriages, and furniture not polished nor made of several different metals not otherwise provided for, from 35 pesetas (\$6.26) to 30 pesetas (\$5.40). The same when polished or made of several different metals, 50 pesetas (\$9) per 100 kilos instead of 60 pesetas (\$10.80) as heretofore.

Safes are reduced from 60 pesetas (\$10.80) per 100 kilos to 48 pesetas (\$8.64). Files, rasps, and saws are by the new tariff assessed at 50 pesetas (\$9) per 100 kilograms, whether from treaty countries or not. (Heretofore American files had to pay \$12.24.) Other kinds of hand tools are assessed at the same rates, and these rates are permanent, as they apply, under the new Spanish tariff, to all countries alike, whether having treaties with Spain or not.

Kitchen utensils made of iron or steel plates not polished, tinned, galvanized, or enameled will pay 45 pesetas (\$8.10) per 100 kilos instead of 60 pesetas (\$10.80). Copper and brass wire will benefit to the extent of 20 pesetas per 100 kilos, the duty being on 1 to 10 millimeter gauge 28.50 pesetas (\$5.13) instead of 49 pesetas (\$8.82), and on the finer wire 30 pesetas (\$5.40) instead of 50 pesetas (\$9). Copper nails, tacks, rivets, screws, etc., will pay per 100 kilos 75 pesetas (\$13.75) instead of 100 pesetas (\$18). This duty, however, would still appear to be prohibitive.

CARTRIDGES, CHEMICALS, ETC.

Cartridges without projectile will pay 75 pesetas (\$13.50) per 100 kilos instead of 90 pesetas (\$16.20). Same with projectile 60 pesetas (\$10.80) instead of 72 pesetas (\$12.96). Rubber shoes will pay 3 pesetas (\$0.54) per kilo instead of 4 pesetas (\$0.72). Oak staves, pitch, pine, and petroleum are already generously imported into Spain from the United States, and now that there is no discrimination against those articles the market for them should be extended here, though at present the first cost of yellow pine in the United States is so high as to have largely affected the market for that product.

Chemical, drugs, acids, chlorates, starch, soap, and patent medicines should also find a better market. The total value of products of this character imported annually is something like 100,000,000 pesetas (\$18,000,000), of which only about 3 per cent comes from the United States. Perfumery with alcohol will pay per kilogram 4 pesetas (\$0.72) instead of 5 pesetas (\$0.90). Resin, tar, and other similar resinous products will pay per 100 kilos 5.25 pesetas (\$0.94) instead of 6.50 pesetas (\$1.17). Varnishes, instead of 36 pesetas (\$6.48) per 100 kilos, will pay only 30 pesetas (\$5.40). Prepared colors, instead of 30 pesetas (\$5.40), will pay 25 pesetas (\$4.50).

Writing inks, instead of 40 pesetas (\$7.20) per 100 kilos, will pay 32 pesetas (\$5.76). Printing ink and boot creams, instead of 25 pesetas (\$4.50), will pay 20 pesetas (\$3.60). Coal-tar colors, instead of 2.50 pesetas (\$0.45), will pay only 1.30 pesetas (\$0.23) per kilogram. Mineral and vegetable wax will pay per 100 kilograms 30 pesetas (\$5.40) instead of 40 pesetas (\$7.20). Mineral wax in bulk 35 pesetas (\$1.30) per 100 kilograms instead of 45 pesetas (\$8.10). The same wax manufactured will pay 55 pesetas (\$9.90) instead of 65 pesetas (\$11.70). Stearin in bulk per 100 kilos 25 pesetas (\$4.50) instead of 35 pesetas (\$6.30). Paraffin in bulk 30 pesetas (\$5.40) instead of 35 pesetas (\$6.30).

Doulton china ware is now exclusively imported into Spain from England, but under the new agreement with reasonable freights it may be possible to import this product from the United States, as it will now pay 24 pesetas (\$4.32) per 100 kilograms (220 pounds) instead of 30 pesetas (\$5.40), as heretofore.

STONE, TIMBER, WALL PAPER, BOOKS, AND JEWELRY.

Among other products which seem to be advantageously affected by the new agreement are jasper and other stones suitable for ornamental work which when in rough blocks will now pay only 1 peseta (about 18 cents) per 100 kilograms (220 pounds) instead of 3 pesetas (54 cents) as heretofore, and when cut into unpolished slabs or tiles 8 pesetas (\$1.44), instead of 12 pesetas (\$2.16). The duty on coal is 3.50 pesetas per ton (63 cents).

Heavy timber will pay 5 pesetas (90 cents) per cubic meter instead of 6 pesetas (\$1.08). Boards having a thickness of less than 40 millimeters instead of 7 pesetas

(\$1.26) per cubic meter will pay 6 pesetas (\$1.08). Fine woods in sheets for veneering instead of 50 pesetas (\$9) per 100 kilos will pay 40 pesetas (\$7.20). Wooden parquet flooring 35 pesetas (\$6.30) per 100 kilos instead of 50 pesetas (\$9). Moldings for picture frames will pay per 100 kilos 43.75 pesetas (\$7.90) instead of 60 pesetas (\$10.80). These goods are imported chiefly from Germany. Furniture made of wood, whether inlaid or not but not upholstered, will pay per 100 kilos 150 pesetas (\$27) instead of 180 pesetas (\$32.40).

Wall paper stamped out and plain ground, per 100 kilos, 30 pesetas (\$5.40); same on dull or glazed ground 60 pesetas (\$10.80); same stamped with gold, silver, wool, or glass, 150 pesetas (\$27). Books printed in Spanish, per 100 kilos, 61.40 pesetas (\$11), instead of 79.80 pesetas (\$14.50). Books in other languages, 10 pesetas (\$1.80) instead of 13 pesetas (\$2.34). Maps and drawings per kilo, 1.25 pesetas (22 cents). Printed or lithographic work, 100 pesetas (\$18) per 100 kilos, instead of 125 pesetas (\$24.30).

Gold watches will pay 15 pesetas (\$2.70) each instead of 18 pesetas (\$3.24). Silver watches and others, 2 pesetas (36 cents) each instead of 4 pesetas (72 cents). Common clocks, alarm clocks with weights and parts, will pay 1.50 pesetas (27 cents) per kilogram instead of 3 pesetas (64 cents). Works for clocks, whether put together or not, and chronometers will pay 3.50 pesetas (63 cents) per kilogram instead of 5 pesetas (90 cents). Cheap jewelry of the sort manufactured in Germany should also find an improved market here. Phonographs, etc., and parts of same will pay 7 pesetas (\$1.26) per kilogram instead of 10 pesetas (\$1.80).

CANNED FOODS.

In the matter of food products there should also be immediate opportunities. For example, now that we are on equal footing with Switzerland, we ought to develop a considerable market here for condensed milk, which will now pay 100 pesetas (about \$17.25) per 100 kilograms (220 pounds) instead of 250 pesetas (about \$43.25) as heretofore when coming from the United States. Big advantages are also offered our canned beef and mutton. Under the old tariff the entry of products of this character was prohibited, as they paid a duty of about 20 cents a pound. Under the new Spanish tariff, which went into effect July 1, they had to pay, when coming from the United States, 40 centimos (about 6½ cents) per kilogram (2½ pounds), and 25 centimos (about 4½ cents) when coming from other countries. The new commercial agreement, therefore, lets our products of this character into Spain at 25 centimos per kilogram, or about 2 cents per pound. Thus the advantage which the Argentine Republic, our only important competitor for the business, would have enjoyed is eliminated by the "agreement" for at least a period of one year. Moreover, exporters of tinned meats would do well to make a big advertising feature of the fact that all such products are Government inspected. The circulation of this fact will be of big advantage in the end, in spite of the bad effects of the recent scandals, which were much exaggerated in Europe.

MEATS AND CEREALS.

Fresh meat will pay 14 pesetas (\$2.52) per 100 kilos instead of 20 pesetas (\$3.60). Hams, bacon, and lard 50 pesetas (\$9), the same as from countries having no treaty, and this is permanent, being fixed by the new tariff for all nations without respect to treaty agreement. Butter, margarine, 70 pesetas (\$12.60) instead of 85 pesetas (\$15.30). Immense quantities of preserved butter are imported into Spain from Sweden, Denmark, and France. Canned beef and mutton will pay 25 pesetas (\$4.50) per 100 kilos instead of 40 pesetas (\$7.20). Canned sardines will pay 25 pesetas (\$4.50). Other canned food stuffs, pickles, sauces, etc., will pay 1.50 pesetas (27 cents) per kilo instead of 2 pesetas (36 cents).

Live oxen (beeves) will pay 35 pesetas (\$6.30) each instead of 45 pesetas (\$8.10). Calves will pay 11 pesetas (\$1.98) instead of 18 pesetas (\$3.24). Glazed kid will pay 2.40 pesetas (42 cents) per kilogram instead of 3.50 pesetas (63 cents). Tanned skins weighing over 9 kilos per dozen will pay 1.50 pesetas (27 cents) per kilo instead of 2.50 pesetas (45 cents). Other tanned skins and hides not specially provided for will pay 2 pesetas (36 cents) per kilo instead of 3 pesetas (54 cents). Leather cut into pieces for boots will pay 3 pesetas (54 cents) per kilo instead of 5 pesetas (90 cents). Boots and shoes, 8 pesetas (\$1.44) per kilo instead of 12 pesetas (\$2.16).

Wheat and rice starch and maizene will pay 30 pesetas (\$5.40) per 100 kilos instead of 40 pesetas (\$7.20). Potato starch and other industrial starches will pay 2.40 pesetas (43 cents) per kilogram instead of 3 pesetas (54 cents). Dextrine instead of 5 pesetas (90 cents) per kilogram will pay 4 pesetas (72 cents).

The above are only some of our products which appear to be favorably affected by the agreement. There are doubtless others all along the line of manufactured products, and in future reports I shall endeavor to call attention to them.

DIRECT EXPORTS TO SPAIN—CERTIFICATES OF ORIGIN.

One advantage of the agreement will be that of permitting direct imports from the United States to Spain without necessitating any of the subterfuges which have heretofore been more or less practiced. It is pretty generally understood that in order to avoid the discriminating tariff various American products have been imported into Spain from Germany, Belgium, England, and other European countries as being the products of those countries. This, under the new agreement, will be unnecessary. There are two regular lines of ships from New York to Cadiz, Barcelona, and other Spanish ports, and goods may now be shipped direct by those lines as well as from New Orleans. The lines having regular monthly sailings from New York to Barcelona are the Compañía Transatlántica de Barcelona, whose New York agent is Emilio Tomassi of pier 10, East River, and the other the Ceballos Line, whose New York agents are J. M. Ceballos & Co., of 27 William street, New York City.

American exporters should not forget that in exporting to Spain in order to secure the benefits of the new agreement merchandise will have to be accompanied by bona fide certificates of origin, which may be authenticated by the Spanish consul at the place of shipment or at the nearest point thereto. These forms should be about as follows, both the Spanish and the English translation being given:

CERTIFICADO DE ORIGEN.

Nos, el cónsul de España, en St. Louis, Estado de Misouri, Estados Unidos de América, certifico: Que los Señores The United States Oil Cloth Company, fabricantes domiciliados en la Calle de Locust (Locust street), No. 16, en St. Louis, y cuya personalidad al efecto es reconocida por mi autoridad, han declarado ante mí, bajo su responsabilidad, que las mercancías designadas á continuación son de su fabricación y por lo tanto de origen de los Estados Unidos de América y cuyos géneros se destinan á Barcelona á la consignación de los Señores Gonzáles y Cmpañía, comerciantes en Calle Cervantes 12, en Barcelona, España.

Número y clase de bultos.	Marcas.	Numera- ción.	Peso bruto.	Contenido.
			<i>Kilos.</i>	
Tres.....	B. P	4	166	Encerados.
Caja	6.....	5	317	Materias de algodón por ribetes.
	Barcelona ..	6	245	Encerados.

Declarado así bajo nuestra responsabilidad.

[SELLO.]

EL CÓNSUL DE ESPAÑA.

St. Louis, 6 de agosto de 1906.

(La validez de este certificado expira tres meses después de la fecha del visado.)

CERTIFICATE OF ORIGIN.

I, the Spanish consul, at St. Louis, Mo., United States of America, certify: That the United States Oil Cloth Company, manufacturers at No. 16 Locust street, St. Louis, whose identity has been ascertained by me, have declared before me, assuming responsibility for the declaration that the goods indicated below are of their manufacture, and, as such, are of United States origin, and are destined for Barcelona,

consigned to Messrs. Gonzáles & Co., merchants at Calle Cervantes 12, Barcelona, Spain.

Number and class of receptacles.	Marks.	Numbering.	Gross weight.	Contents.
			<i>Kilograms.</i>	
Three	B. P	4	166	Oilcloths.
Box	6.....	5	317	Cotton materials for binding.
	Barcelona ..	6	245	Oilcloths.

Declared under my responsibility.

[SEAL.]

St. Louis, August 6, 1906.

SPANISH CONSUL.

NOTE.—The validity of this certificate expires three months after its certification.

It should be remembered that the above certificate is required to be in Spanish and the merchandise should also be plainly described in Spanish in such manner as to leave no doubt as to its technical classification. The merchandise should never be referred to as of American origin, or even of North American origin, but always as of the United States of America origin (Los Estados Unidos de America).

It may be added that Spanish consular officers are stationed in the following cities in the United States: New York, New Orleans, Baltimore, Boston, Brunswick, Ga., Brownsville, Tex., Charleston, S. C., Chicago, Fernandina, Jacksonville, Philadelphia, Galveston, Gulfport, Miss., Mobile, Norfolk, Pensacola, San Francisco, St. Louis, Savannah, and Tampa; also at Honolulu, Hawaii.

SOME COMMERCIAL OPINIONS.

In view of the new agreement I addressed letters to the agents of this consulate-general in Spain as well as to certain merchants in Barcelona, asking them what in their opinion would be the American products which may now be more advantageously imported into Spain than heretofore. Some of the answers are briefed and given herewith. The consular agent at Tarragona writes:

In reply to your circular, and keeping in view the fact that this district is greatly dependent on Barcelona for the imported goods it receives, only a very imperfect local opinion can be formed as yet with regard to which American products may be mostly and immediately favored by the reduction of import duties in Spain. One article, however, will be specially benefited if judiciously handled and presented on our market, and that is condensed or preserved milk, of which considerable quantities have hitherto been imported from Switzerland. On a smaller scale other dairy products and bacon (long and short backs) will also find an outlet here.

The consular agent at Santander, a large seaport town in the north of Spain, writes:

In my opinion there is now an opportunity to develop American trade in Spain, within the limits of the reduced market offered by this country, by taking advantage of the application to American goods of the second column of the new Spanish tariff, since, for a time at least, goods from some other countries, Germany excepted, are charged higher duties, as per the first column of the said tariff.

Deficiency of the elements of traffic will be met with, as there are neither banking connections nor a direct line of transport between the United States and the north and northwest of Spain. Through absence of banking intercourse Spanish buyers are required to forward checks for the amount of the order before shipment, and the goods coming by roundabout routes and using tramp steamers, are often delivered more than two months from date of expedition and three or four months from time of buying. Traffic on such lines is not likely to develop, and it is to be deplored, as considerable merchandise might otherwise be imported from the States, such as machinery, drugs, starch, soap, and patent medicines.

The use of machinery of all kinds is becoming popular in Spain, and American goods are generally appreciated, when known, through their practical mechanism and easy repair. Energetic representatives and a show room where the machinery could be examined would be sure to push business, mostly in pumps, mining machinery, tools, and carriages, including bicycles. Motorism is invading the upper classes and American cars of good workmanship and moderate price, not designed merely for sport but for daily use, would have a chance, if previously seen by intending buyers.

Direct transport would allow the importation of parcels of cotton and grain in moderate amounts. In the case of cotton the deduction of duties to direct imports would be an incentive for small industries not using complete cargoes. The wheat harvest now reaped being quite satisfactory, wheat imports into Spain are likely to be unimportant for the present, but there will be need of some maize, now imported from Russia and indirectly from the north of Europe, dried peas (*garbanzos*), and other grains now being imported from Mexico. Electrical goods, cheap jewelry, writing machines, pianos, and musical instruments, as well as leather, leather manufactures, and rubber shoes might also see their market enlarged.

The consular agent at San Feliu de Guixols writes:

This district imports very little, for mostly all the foreign articles consumed are supplied by the importing houses of Barcelona. However, my opinion is that the new reciprocity treaty will favor the importation from the United States of patent medicines, hardware, machinery, agricultural utensils, lumber, cereals, fertilizers, novelties, and electrical devices.

The consular agent at Bilbao, the most important port in northern Spain, writes:

In my opinion the only goods that can be imported at Bilbao from the United States with any advantage, paying the second column's duties of the Spanish tariff, are machinery, industrial and agricultural, and hams, bacon, and lard.

An important Spanish firm importing foreign products writes:

In our opinion, since the United States will now enjoy Spain's lowest scale of duties, the following products may be imported to better advantage than heretofore: Corn flour, dextrin, rubber and rubber articles, condensed milk, varnishes, glues (powdered and solid), paint colors, condensed-milk cream, coffee and condensed-milk extract, canned meats, hams, butter, patent leather, paint brushes, mineral oil, wood pulp, casein, laundry machines, brick-making machinery, leather, imitation leather for upholstery, shoe polish, tallow, soap, casings.

AMERICAN CONCESSIONS TO SPAIN.

The United States has, under the new agreement, conceded to Spain all that can be conceded to any country under section 3 of the Dingley bill (except a reduction of the duty on champagne), and Spain is to enjoy all that we may subsequently concede to any other nation during the existence of the agreement (except to Cuba). These concessions are the following:

Crude tartar, or wine lees, or argols, crude, 5 per cent ad valorem. Brandies or other spirits manufactured or distilled from grain or other materials, \$1.75 per proof gallon. Still wines and vermouth, in casks, 35 cents per gallon; in bottles or jugs, per case of one dozen bottles or jugs containing each not more than 1 quart and more than 1 pint, or 24 bottles or jugs containing each not more than 1 pint, \$1.25 per case, and any excess beyond these quantities found in such bottles or jugs shall be subject to a duty of 4 cents per pint or fractional part thereof, but no separate or additional duty shall be assessed upon the bottles or jugs. Paintings in oil or water colors, pastels, pen-and-ink drawings, and statuary, 15 per cent ad valorem.

SPANISH BRANDY SHOULD BENEFIT MOST.

Spain exports no argols or crude tartar to the United States, and very little brandy or other alcoholic spirits. She does export a few paintings, however, and in 1904 she exported wine (principally sherry) to the value of 596,396 pesetas, equal to about \$104,000. There has been a steady falling off in these wine exports to the United States for

years, because of the decreasing popularity of sherry and Malaga wines, and it is not likely that the decreased duty will very largely stimulate the exports of those products. On the other hand, there is now no reason why Spain should not export her excellent brandy to the United States in considerable quantities. It is a pure brandy of the Cognac type manufactured from excellent grapes without any use of wood alcohol or potato alcohol or other deleterious spirits, and now that Spain is to enjoy the same reduced tariff as heretofore conceded by treaty to France and other countries—i. e., \$1.75 per gallon (instead of \$2.25)—I repeat that there is no reason why she should not export brandy to the United States, and in that important branch of her commerce she should benefit immediately under the new agreement.

Spain should also find an increased market for her paintings in America. As to the trade between the two countries, the balance is largely in favor of the United States. In 1904, according to Spanish customs statistics, Spain exported her products to the United States to the extent of 27,695,696 pesetas (\$5,035,580), while she imported from the United States a total of 102,268,753 pesetas (\$18,594,822).

FOREIGN COMMERCE.

INCREASE IN THE COUNTRY'S IMPORTS AND EXPORTS.

Consul R. M. Bartleman, of Seville, reporting on the foreign commerce of Spain, says:

The total trade in 1905 amounted to 1,856,436,711 pesetas, of which the imports were 978,748,802, the exports 877,683,969, an increase in imports compared with 1904 of 148,008,153, and in exports of 81,117,211 pesetas. The greatest increase in imports is shown in foods, while metals and their manufactures show the largest gain in exports.

The following comparative statement shows the trade in detail:

Articles.	Imports.		Exports.	
	1904.	1905.	1904.	1905.
	<i>Pesetas</i>			<i>Pesetas</i>
Alimentary substances.....	168,098,679	145	34	392
Animals, and their products.....	70,408,064	68	5	112
Cotton, and manufactures of.....	107,880,188	69	3	574
Drugs and chemicals.....	96,408,808	32	2	114
Machinery.....	76,008,157	52		780
Metals, and manufactures of.....	84,092,931	68	12	384
Minerals, pottery, etc.....	95,069,739	61	16	134
Paper and paper goods.....	12,377,141	88		36
Railway material.....	10,067,789	65		
Silk and silk goods.....	23,869,487	73	4,995,584	8,063,718
Tobacco.....	26,522,253	42		
Vegetable fiber, manufactures of.....	23,617,804	119	1,608,254	1,841,029
Wood, and manufactures of.....	60,993,610	16	42,587,886	45,218,789
Wool and woolen goods.....	21,066,070	91	18,428,689	28,651,148
All other articles.....	4,249,489	9,252,574	3,892,019	8,867,711
Total.....	880,740,649	978,748,802	846,576,756	877,683,969

NOTE.—The value of the peseta in 1904 was 13.7 cents and in 1905 it was 13.2 cents.

COMMERCIAL TRAVELING IN SPAIN.

American commercial interest in the Spanish trade is increasing. It may be remarked that traveling in Spain is not costly, as the charges by comfortable hotels are but \$1.35 per day. A foreign publication states that in sending travelers to Spain a man of good presence should

be chosen. The traveler should, as the Germans do, take the initiative in invitations to dinners or theaters, so as to create an agreeable intimacy with customers. Such intimacy once established, the traveler should leave behind him an agent whose business will be to keep the buyer in touch with the firm. It is not, however, advisable at first to depend too much on the agent to obtain many orders. He will, however, prepare for the arrival of the traveler, who will be received as a person already known.

GREAT BRITAIN.

FOREIGN TRADE OF HULL.

MARKED IMPROVEMENT DURING 1905 IN THAT PART OF BRITAIN.

Consul W. C. Hamm, of Hull, reports trade conditions in Hull during 1905 as follows:

The marked feature in the trade of Hull during the six months ended December 31, 1905, was the improvement in business conditions. The change was not apparent until late in September, but when once started it maintained its volume throughout the year. Each of the three ports on the Humber River included in this consular district began to show in September a gain in both imports and exports, the total trade amounting to \$35,000,000 more than in 1904. The following table shows the trade of each port for the years 1904 and 1905:

Ports.	Imports.		Exports.	
	1904.	1905.	1904.	1905.
Hull	\$159,293,650	\$162,729,430	\$95,496,965	\$105,018,430
Grimsby	50,776,645	53,437,105	53,749,840	57,517,745
Goole	32,597,020	89,631,340	37,930,685	42,583,735
Total.....	242,667,315	255,797,875	187,177,490	205,114,910

A large fraction of the gain in imports at Hull was due to the increased importation of wheat. In 1904 the imports were 18,314,000 hundredweights, valued at \$31,754,975, and in 1905 they were 19,114,200 hundredweights, valued at \$34,044,250. Since 1901 the imports have increased over 50 per cent. Nearly all the wheat is ground into flour in the Hull mills, and is consumed locally or sent to the Continent. The following table gives the sources of supply of the wheat which entered Hull for the years 1904 and 1905:

	1904.	1905.		1904.	1905.
America:	<i>Quarters.</i>	<i>Quarters.</i>		<i>Quarters.</i>	<i>Quarters.</i>
East coast	1,018,115	1,099,006	Germany.....	16,689	31,008
West coast.....	59,134	30,123	Kurrachee (India).....	1,419,585	1,651,064
Australia	193,405	150,366	Russia	1,189,378	1,262,566
Bombay	137,668	69,180	Roumania	31,901	49,141
Calcutta	184,951	136,098	All other.....		400
New Zealand.....	9,126				
Egypt	233		Total.....	4,260,185	4,478,943

NOTE.—Quarter = 8.252 bushels.

One of the principal features of the wheat trade was the fact that in spite of the troubles in Russia the importations from that country again exceeded those of the previous year. India shipped freely, the imports from Kurrachee forming a record.

BUTTER AND OTHER FARM PRODUCTS.

Next to wheat the most valuable article imported into Hull was butter, the value of which in 1904 was \$15,761,370, and in 1905 \$15,172,305. Only a small part of the butter comes from America, nearly all of it being supplied from Denmark, Holland, Australia, and New Zealand. Cotton seed and linseed form a large import, the value being nearly \$15,000,000. Most of the cotton seed comes from Egypt and India, while the source of linseed is almost wholly from Argentina. The import of oil seeds were: Linseed, 812,329 quarters; rape seed, 72,374 quarters; and cotton seed, 263,952 tons. The importation of oil cake has more than doubled in the past five years, 13,345 tons coming in 1901 and 30,995 tons in 1905. Wool is becoming an important item in imports, although the quantity has varied greatly in different years. In 1901 over 45,000,000 pounds were imported; in 1903, less than 20,000,000, and in 1905, 31,000,000 pounds.

The countries from which the larger supplies of wool were drawn are shown in the following table:

Country.	1904.	1905.	Country.	1904.	1905.
	<i>Pounds.</i>	<i>Pounds.</i>		<i>Pounds.</i>	<i>Pounds.</i>
Australia	9,051,451	18,843,030	Belgium	1,197,064	1,633,657
Russia	4,665,741	4,026,828	Italy	767,344	1,451,268
France	1,276,429	8,185,660	Germany	1,066,391	903,061

It is believed that the importation of wool will increase rapidly in the future now that a regular line of steamers between Hull and Australia has been established.

TRADE WITH THE UNITED STATES.

The chief articles of import from the United States were animals, cheese, cotton, wheat, corn, implements and tools, lard, leather, meats, tallow, etc. The following comparative statement gives the quantities of nine principal articles of import from the three cities mentioned:

Article.	New York.	Boston.	New Orleans.
	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>
Animals, cattle.....	3,357		
Breadstuffs	25,256	12,207	9,086
Cotton seed.....			500
Glucose.....	4,353		56
Lumber, etc	3,930	498	1,099
Meal, cotton-seed.....			6,175
Molasses.....	315		421
Oil cake	1,107		1,164
Provisions.....	15,817	198	53

a Number.

Another marked feature of the trade of Hull for a few years past has been the increase in the number of ships sailing to the Gulf ports

and the decrease of those sailing to the Atlantic ports. This increase is specially noticeable at Galveston and New Orleans.

The exports to the United States for the calendar year 1905 amounted to \$930,952, and consisted of the following principal articles: Hides and skins, \$204,770; leather, \$111,592; castor seed, \$35,867; seed oil, \$81,065; washing blue, \$86,792; wool, \$31,160; herring, \$60,321; old rope, \$23,082, and colors, \$19,730.

SELLING SILVERWARE.

POPULAR BRITISH STYLES—PROSPECTS FOR AMERICAN PLATED GOODS.

Consul Frederick I. Bright advises that there is a good and general demand for electroplated hollow ware in the Huddersfield consular district. He says:

The following lines are found in the market to meet the requirements of trade: Biscuit jars, casters, cake baskets, coffee sets, berry or fruit dishes, cups and saucers, fern dishes, jewel boxes, loving cups, napkin rings, pickle dishes, punch sets, sauce boats, butter dishes, sirup pitchers, tea sets, water sets, trays, waiters, and various novelties. The following lines are kept in stock by dealers, but the demand for them is small: Candelabra, puff boxes, toilet sets, lavatory sets, and urns. Crumb sets are to be found in what may be called the English equivalent, but having a different name. The baking dish, popular in the United States, is not found in this district.

THE GOVERNMENT STAMP.

Formerly nearly all of such wares were in electroplating, but in later years the demand has greatly increased for the standard silver in the smaller wares and novelties. Thus it would now seem that the most promising field for electroplating would be in the larger lines. There is another reason for this. The ordinary purchaser of these wares from the retail merchant is not a little distrustful of his own ability to judge the merits of electroplating as to its quality and durability. He has, however, implicit confidence in the Government stamp, the "Lion Passant," which is required by law to be stamped upon all silver plate, whether of foreign or domestic origin, as a guaranty that it contains at least 11 ozs. 2 dwts. of silver to the pound troy, and it is therefore natural for the purchaser to buy the silver plate which has been assayed and marked as above when within his means.

It is provided by law that imported gold and silver plate must be first officially assayed, stamped, and marked before being offered for sale in the United Kingdom in the same manner as any ware made locally, but with the addition of the letter "F." If any imported gold or silver plate is found to be of coarser alloy than the standards, such ware is cut, broken, and defaced at the assay office. In explanation of the law quoted it may be said that the term "silver plate," as used, is meant to include only what is commonly known as the "solid silver" or "standard silver."

TRADE DESCRIPTIONS—RETAILERS BUY DIRECT.

As to the electroplated ware there are no such restrictions, except those applying to all manufactured articles, by which it is illegal to

sell goods in England containing any "false trades description," and manufactured goods are stopped by customs officers at the port of entry if they contain any false trade description. Any mark upon ware which amounted to a "direct or indirect statement or indication" that the ware was made in England would be a false trade description within the meaning of the law. Goods bearing the mark or initials of the English importers or of the agents in England to whom the goods were consigned would be considered a false trade description, unless it were accompanied by a qualifying statement showing that the goods were in fact made in the foreign country.

American electroplated ware is not represented here, the English goods having almost exclusive control of the market. There is a very small quantity of the German, for which there is a little demand. There are no wholesale silverware dealers in the district and the retailers buy directly from the manufacturers at Sheffield and Birmingham.

POPULAR DESIGNS—SHOWROOM DISPLAYS.

As to style, the demand is decidedly for the plain ware with bright finish, the general criticism of foreign wares being that they are too elaborate in chasing and engraving and the finish too dull. The modern designs are not entirely free from chasing and engraving, but can not be called elaborate. In antiques the "Old English" styles, Elizabethan, Queen Anne, and Georgian are greatly in demand. Queen Anne and Georgian coffee sets are very popular. In the cheaper ware the silver is deposited upon what is known as "white Britannia metal" and in the better ware upon "nickel-silver."

Huddersfield has never been an importing district, the merchants of the district generally buying foreign products and manufactures from the great wholesale houses at Manchester, Liverpool, and London. It has been customary for foreign manufacturers to open "show or stock rooms" at Leeds, Manchester, or other convenient places, where samples of goods are exhibited. It has become customary for manufacturers to pay railway fare of merchants and to make the occasion a pleasant holiday. The retail merchants have great confidence in their ability to judge the merits of wares, and there would be little hope for the successful introduction of foreign wares by a system which does not afford an opportunity for a previous examination and inspection.

TACT OF AMERICAN SALESMEN—CREDIT SYSTEM.

There seems to be some difference of opinion as to the value of the American commercial traveler in the English field, but in general his shrewdness and tact is recognized. Without any experience or knowledge of English business methods or manners, it is not to be expected that he will meet with immediate success. However, we believe it a warranted conclusion that no better agent could be obtained than an American, who, along with his natural sympathy for American interests, should have experience and knowledge in English customs and methods and if possible a friendly acquaintance among merchants desired to be reached.

It has not been the custom to place a single line of wares with more than one, two, or three retailers in places of this size (100,000), and more frequently with a single retailer. As to methods of payment

the "journey-to-journey" method has been in general use, although some manufacturers have adopted different terms. A discount of 5 per cent is given if bills are paid within one month and 2½ per cent if paid according to the journey-to-journey method. This plan generally gives the retail merchant three or four months' time, according to the period of time between journeys.

[A list of the principal retailers of silverware in the Huddersfield district can be obtained from the Bureau of Manufactures.]

PRICE AGREEMENTS.

OLD SYNDICATES OR TRUSTS REVIVED AND REORGANIZED.

Consul Albert Halstead, of Birmingham, reports a movement among British manufacturers of metal bedsteads to keep up prices by combining. Such a combination existed several years ago, and was the cause of a bitter contest. Consul Halstead says:

With improving trade there seems to be a general tendency on the part of British manufacturers to agree as to prices for their products. With improved business conditions and an increasing demand for goods, price cutting necessarily seriously decreases profits, and manufacturers begin to appreciate the advantages of an agreement as to selling prices. A movement has been started to secure a price agreement in the metal bedstead trade in this district, with the desire to make the business more remunerative. A pooling association previously existed and ended in May. There appears at present to be no immediate prospect of a renewal of this pooling agreement, tho a meeting was called, which is understood since to have been postponed. As practically all the metal bedsteads manufactured in the United Kingdom are made in Birmingham, such a pooling arrangement would be beneficial if the prices were not increased too much. Severe competition with resultant sharp price cutting, has seriously curtailed profits.

Consul Halstead calls attention to a rumor about the Welsh steel makers combining with a view to regulating the prices of their products. The Birmingham Daily Post says of the matter:

One of the reasons advanced for the opportuneness of the movement is the absence of foreign competition, and it is interesting to see what has happened in this connection. So far this year the imports of foreign billets, blooms, etc., have amounted to 337,451 tons. This quantity is 18,006 tons greater than was received in the corresponding months of 1905 and 12,835 tons greater than in 1904. Figures such as these do not suggest that foreign competitors are less formidable than they were. As a matter of fact, the frequenters of the exchanges have mistaken a change in methods for declining competition; as quantity has increased so has value. Imported steel of the kinds mentioned was valued at \$7,345,305, which was \$689,427 more than in the corresponding period of last year. Quantity, therefore, has increased 5.6 per cent, and value 10.3 per cent. It would be a mistake to describe such competition as less effective. Foreign producers seem to have discovered that in the past they made a mistake in "cutting" prices so much below those of British makers. It was only necessary to keep moderately below the British level, and having proved this

their policy has been shaped accordingly. For a long time nothing has been heard of sensational prices, but the markets have been captured all the same, as the figures prove. The remainder of the year may see a complete change in the situation. Undoubtedly the incoming material has been on old contracts, to adopt a trade expression, and business may be more scarce, tho current contracts are believed to be far from exhausted, but it is well that the real meaning of recent experience should be accurately grasped, and that there should be no sensationalism nor engineered panic.

MOTOR WAGONS.

SUCCESSFUL EFFORTS TO INTRODUCE THEM IN MANCHESTER.

Consul W. H. Bradley, of Manchester, reports a movement among the merchants and manufacturers of his district to do a large part of their heavy drayage by means of motor drays. The ship canal has contributed a great deal to the new movement for improved and cheaper drayage, for the cotton that comes in on the ships is carried to the mills by the new motor wagons, and bricks, dirt, etc., are also being transported by the new wagons. Even the railroads are adopting them. Consul Bradley writes:

Steam and gasoline motors are already doing a good share of the heavy work in and about the city. I have called upon a number of owners of power trucks, or, as they are called here, motor luries, to get results. The answers to my questions were, briefly, that trucks with power to carry 5 tons and haul 3 tons loaded on an extra truck behind them, cost \$2,250 and upward. The trucks haul loads to docks or station, unhook the trailer, which is left to be unloaded and loaded again with return goods, and take an extra trailer already loaded in tow back to the works. Thirty miles a day is said to be a paying run. One firm is said to have ordered a large number, finding that they could do their hauling from the suburbs direct cheaper than by rail. The only adverse criticisms I heard were that the wagons sometimes slip on the iron stone sets in frosty weather, and, on the financial side, that they must have full loads to make them pay well.

TAXATION IN SCOTLAND.

FINANCIAL RESULTS OF GOVERNMENT OWNERSHIP OF UTILITIES.

Consul Rufus Fleming, of Edinburgh, quotes from the Scottish taxation returns for the financial year 1904, which shows that the total amount of debt of local authorities outstanding at the close of the year was \$288,656,146, an increase of \$13,832,763 over the local indebtedness at the end of the previous financial year.

It appears also that local rates or taxes have been steadily rising. In 1893-94 the average rate of assessment per pound sterling of gross rental was 72.1 cents; in 1903-4 it was 93.4 cents, an increase in ten years of about 29.5 per cent. During the same period the local taxation per capita rose from \$4.281 to \$6.0865—about 42.2 per cent. The increase of assessments has been due mainly to higher rates for purposes of education, sanitation, water supply, and roads.

An interesting feature of the report is a statement of the revenue and expenditure of local authorities from and on revenue-producing undertakings—in other words, public utilities owned and operated by town councils or other public bodies. In the following table, taken from the returns, expenditure includes payments for redemption of debt, and depreciation when special provision is made for that purpose:

Undertakings.	Revenue.	Expenditure.
Gas supply (exclusive of public lighting)	\$8,484,801	\$8,608,877
Electricity supply (exclusive of public lighting)	1,871,140	1,772,822
Tramways	4,564,159	4,189,035
Light railways	1,051	14,147
Water supply	1,956,640	4,295,163
Telephones	241,622	223,854
Markets	241,135	174,795
Slaughterhouses	189,701	187,492
Public baths and washhouses	174,503	314,697
Private improvement expenses	219,453	215,406
Working-class dwellings	841,453	503,313
Working-class lodging houses	123,940	111,404
Burial grounds	180,670	364,452
Harbors and ports	5,158,432	5,145,214
Total	23,748,700	26,120,671

Only electricity, tramways, telephones, markets, and two or three other undertakings have yielded an excess of revenue over expenditure. In connection with the above significant statistics it may be useful to consider the rate of taxation in the seven principal cities of Scotland.

City.	Local taxes per \$4.86 of gross rental.	City.	Local taxes per \$4.86 of gross rental.
	<i>Cents.</i>		<i>Cents.</i>
Glasgow	99.6	Leith	75.7
Edinburgh	76.7	Paisley	108.9
Aberdeen	97.4	Greenock	87.6
Dundee	83.0		

In Glasgow, Aberdeen, and Paisley local taxation exceeds the average rate for the whole of Scotland. It is noteworthy that these three cities have been specially enterprising in the matter of municipal trading. The conclusion seems unavoidable that whatever benefits municipal ownership of public utilities may have bestowed upon the masses, it has not tended to lighten the burdens of taxpayers, remarks the consul.

SCOTCH MARKET STUDY.

OPPORTUNITIES OFFERED TO AMERICAN MANUFACTURERS.

Consul Fleming also forwards a series of trade notes concerning opportunities for American merchants and manufacturers to extend their trade, particularly in that part of Scotland in which Leith, the seaport of Edinburgh, is located. - He thinks there is a good chance for lawn mowers, although a Scotch firm has begun to make a cheaper article than the American. Patent stoppers as substitutes for corks, in which this country excels, would, Mr. Fleming thinks, find ready

and extensive sales, since Edinburgh is the center of a large ale, beer, and aerated-water trade. Consul Fleming continues:

For many years American lawn mowers have been largely sold in this part of Scotland. Soon after their introduction they gained a reputation for excellent work, lightness, and durability, which has been steadily enhanced by the experience of an increasing number of purchasers. A dealer informs me that, on the point of durability, the American lawn mower has a remarkable record. Some of these American machines, brought him for repairs, have been in use twelve or thirteen years. A lawn mower of Scotch manufacture now on the market is a little cheaper than the American article, and, being made of malleable cast steel, finds some favor.

Patent stoppers versus corks.—This city is the center of the ale and beer and aerated-water production in Scotland, hence the bottling departments of these industries afford an important market for corks. Not long ago screw stoppers (vulcanite with rubber washers) were introduced. They have almost wholly displaced corks for all aerated-water bottles. For ale and beer bottles spring stoppers have been gradually superseding corks, and their use is now rapidly extending. Cork importers and manufacturers say that their business has been seriously affected by the patent stoppers.

AUTO LINE EXPERIMENTS—DAIRY PRODUCT IMPORTS.

Motor omnibuses.—While the motor car has apparently lost none of its popularity and the number in use is increasing, the motor omnibus does not seem to fulfill the expectations of those who have started suburban or interurban lines of these conveyances. The lines to and from places near this city have not yet proved successful. The principal objection to the motor omnibus here on the part of the public is the dust. This greatly restricts travel on these lines. The cost of repairs, mainly arising from the wearing out of tires on hard uneven roads, exceeds any estimate that had been made by experts or others. It is the opinion here that the motor omnibus will not be permanently useful as a public conveyance in Scotland outside of cities and large towns.

Butter and cheese.—In the average year the imports of butter at Leith reached a total value of about \$11,000,000. Siberia and Denmark have long been the principal sources of supply. Imports of cheese, mainly from Canada and Holland, have amounted annually to about \$950,000. New features of the provision trade at this port are considerable receipts of butter from Australia and cheese from New Zealand. Both articles are said to be of satisfactory quality, commanding good but not the highest prices. It is not thought that Australian and New Zealand butter and cheese will, to any great extent, displace these products from other countries in the near future, but the development of this trade is watched with much interest by wholesale provision merchants.

BUILDING UTILITIES.

Hardware.—Special lines of American hardware, such as tools and farm implements, are in fair demand, but there has been for several months a decline in the sales of our general hardware. Asked for an explanation a wholesale dealer said to me: "In many lines we can do

better in Great Britain in prices. The tendency is toward a very narrow margin of profit in the English hardware industry."

Paint.—A moderate quantity of American paint comes to this district. For two or three years there has been a good demand for an American copper paint. Its success has induced paint manufacturers on this side to imitate it, and now similar paints made in Norway and in England are competing strongly with the American article.

Steel for building purposes.—Structural steel has never been freely employed in the building trade in Edinburgh, except as a support for floors, partition walls, etc. A large warehouse now in course of construction will have a complete framework of steel on the American plan, around which the structure of stone will be erected. It is expected that this departure from the old method of building will lead to the more general adoption of steel frames for business houses of extraordinary size.

GERMANY.

INCREASING TRADE.

REMARKABLE PROGRESS—SHIPPING IN THE MEDITERRANEAN.

In recent years the German Empire has succeeded in getting a good hold of trade in the Mediterranean, putting ships into service where hitherto Great Britain and other countries have been supreme. For years she has had a line of passenger ships running from Marseille to Naples and Egypt furnishing active competition to every other line. A German line put ships on between Genoa and French Mediterranean ports. Still another German line has been established to run ships from Marseille to Turkey.

The reason for this gain, as given by a leading German commercial paper, "Export," which is here quoted, is the excellent modern equipment and service of the German ships. It is interesting to note in connection with this matter that the German Commercial High School, of Cologne, sent 70 students on one of these German ships to make a tour of observation in connection with their school work, during which the young men visited every important Mediterranean port. It is hardly necessary to say that the students were accompanied by the professors, who were best able to aid them in understanding what they saw.

That French commercial circles are watching Germany's industrial and commercial progress is natural. That the interest is eager and that a feeling of unrest is resulting is also true, for the figures for the two countries in the last twenty-five years are startlingly favorable to the Empire. In 1881 Germany's total trade amounted to \$1,415,076,000 and that of France to \$1,625,832,000; in 1905 Germany's foreign trade was \$2,935,337,000 and that of France \$1,820,955,000; a tremendous increase in the case of the Empire. If a single recent year is taken, the difference is just as significant. For example, Germany's imports in 1905 increased \$87,236,000, her exports \$86,464,000, while the increase in French imports was only \$33,000,000 and the exports \$60,023,000, or a total in the year's trade of \$173,700,000 for Germany and \$93,000,000 for France.

SOUTH AMERICAN SALES.

GROWING COMMERCIAL INTERESTS IN BRAZIL AND CHILE.

Consul E. L. Harris, writing from Chemnitz, says that there are 150 large commercial export houses managed and owned by Germans engaged in various business enterprises in Brazil.

At least one-third of the coffee export trade from that country to Europe is carried on by these firms. The capital behind them is estimated to be about \$125,000,000, a stately sum when it is considered that they began only a short time ago with comparatively small amounts of money; gradually expanding and meeting the requirements of the trade. Apart from this it is estimated that \$10,000,000 of German money have recently been invested in Brazil in weaving and spinning mills, tobacco factories, and brick yards.

What is true of Brazil is equally true of Chile, although in a different way. Chile has been the recipient in recent years of quite a stream of German emigrants, who for the most part engage in farming, although the coast cities are plentifully sprinkled with small German colonies. There are a great many resident Germans in Valparaiso engaged in trade enterprises, and the earthquake which has just stricken that city has endangered German banking interests to no small extent.

SUCCESSFUL EXPORT METHODS.

REASONS WHY GERMANY HAS MADE REMARKABLE PROGRESS.

Consul-General Richard Guenther, of Frankfort, reports the results of some expert investigations made by a Frenchman in the matter of the German and French lace-manufacturing industries and writes:

The expert spent considerable time at Plauen, the center of Saxon lace manufacture, for the purposes of study and close investigation. He comes to the conclusion that the incontestable supremacy of the German lace trade in the world's markets is not due to any superiority in the quality of their goods or to their mode of manufacture, but is owing to the greater mercantile capacity and superior selling methods of the Germans, which afford many little advantages over their French competitors. Among these methods he cites: First, the linguistic ability of the Germans. In every German lace-exporting firm there are employees who speak English, French, and, in some cases, Spanish. In the wholesale trade nothing facilitates a good understanding so much as the power of direct communication by language. Where interpreters have to be resorted to a loss of time and frequently errors occur. Second, the German manufacturers and their representatives are very accommodating in meeting the wishes and wants of their foreign customers, and do not attempt to obtrude their notions of taste or style upon them. Third, the manner in which the Germans write their invoices, giving net weight of contents, of casings, and other descriptive matter. All these are worthy of emulation. Moreover, the German business houses show much greater liberality in furnishing collections of samples and in their credit terms.

But the chief reason of the German success, says this French expert, is to be found in the fact that the German manufacturers personally

visit foreign countries in order to make themselves familiar with what is used and wanted there. The Germans are enterprising; they do not wait till business comes to them; they start to get it. In short, the great manufacturers of Calais, Lyon, Roubaix, etc., are purely manufacturers, whereas the manufacturers of Plauen and other industrial centers of Germany combine great mercantile ability with manufacturing talent.

BARMEN INDUSTRIES.

BUSY FACTORIES AND BRISK BUSINESS IN MANY LINES.

Consul G. E. Eager reports concerning the trade of Barmen, one of Germany's great industrial centers, which with Solingen form a kind of Sheffield and Birmingham combined. What is true of its industrial life is in large measure true of the Empire's industries, even textiles, for Barmen and cities not far away spin and weave enormous quantities of yarns, cloths, etc. Consul Eager writes:

Since the unfortunate period of 1900-1901 there has been slow but steady improvement in commerce. All textile industries have been prosperous and fairly satisfactory. The Russian-Japanese war and the social troubles in Russia have had scarcely any effect upon the production of Barmen goods, notwithstanding that Russia has always been one of Barmen's best markets.

Cotton yarn.—The decline in prices of cotton yarn in 1904 continued until June, 1905, when the Barmen Cotton Exchange quoted an advance from 11.78 cents per pound to 14.5 cents a pound. Manufacturers failed to take advantage of the low prices, believing that the cotton crop would be large. In December, 1905, the estimate of the number of bales of cotton was placed at 10,168,000, which caused higher prices, and dealers and spinners profited thereby.

Raw silk.—Prices declined in the beginning of 1905 but soon rallied, but orders were limited, however, awaiting a favorable new crop. As Italy and Japan produced only a small average crop prices advanced accordingly, reaching a point 10 per cent higher than in 1904.

Clothing.—Owing to the advance in wool and cotton the qualities of heavier clothing used by the working classes advanced decidedly and had to be replaced by goods of cheaper and less durable quality, making it difficult for the wholesale dealers to do a profitable business.

Braids, cords, and trimmings.—Of the raw materials used in these articles, artificial silk is the favorite, and if they continue in fashion it will probably remain in the lead. In insertions made of artificial silk there was a heavy demand. The exports to the United States showed an increase of \$30,000 over 1904.

Silk goods.—There was a demand for silk chenille during the first half of 1905, but French competition has so reduced the prices that Barmen manufacturers have ceased to make them. Business in ribbons is not good and only the very cheapest grades can be exported to the United States with a profit. There has been no change in silk hatbands, competition has increased, and prices have remained low and unsatisfactory.

Carpets and upholstery.—Trade in carpets has been extremely brisk, but manufacturers complain of the fluctuation of cotton and the high prices of wool, which were severe during the last quarter of the year. Manufacturers of upholstery goods kept their looms running through-

out the year, although business was quiet during the summer months, and the usual dissatisfaction in regard to prices was expressed.

Belts and neckties.--During the fall and winter many looms were kept busy weaving articles, made of silk, artificial silk, and cotton and glazed yarn.

FOOD PRODUCTS.

During 1905 the increase in prices of provisions were so great that everybody suffered, the working classes in particular. The prices of meat advanced so that the poorer class could not afford to buy the article, but had to look for a cheaper nourishment.

The prices of meats in Barmen per 2.2 pounds advanced as follows: Beef, 34.5 to 38 cents; pork, 40.5 to 44 cents; veal, 39.25 to 46.5 cents, and mutton, 39.25 to 40.5 cents. Owing to these increases city corporations, chambers of commerce of different places, and others urged the Government to import live stock and slaughtered cattle and also all kinds of canned meats. A new treaty was negotiated with Russia and Austria-Hungary and since March 1, 1906, the importation of live stock has been admitted.

During 1905 there were slaughtered at the Barmen abattoir 12,876 head of cattle, 8,427 sheep, 36,667 hogs, and 666 horses.

ECONOMIC DEVELOPMENT.

DEVELOPMENT IN 1905 ALL THAT COULD BE EXPECTED.

Consul A. Halstead, of Birmingham, forwards a report on industrial conditions in the German Empire, based upon an extract from the annual report of the British consul-general at Frankfort, which deals with Germany's commercial progress. Consul Halstead thinks the report should be of as much interest to merchants and manufacturers in the United States as to the merchants and manufacturers of Great Britain.

The Empire's economic development in 1905, says Consul-General Oppenheimer, was as good in every way as in any recent year. All the forces of the country that could do so contributed to this success. The year 1904, the last under the old trade treaties, saw a rush to get goods in or ordered under the old conditions and at the old prices. Increased activity everywhere was the result. Besides, good harvests helped agriculture, putting money into the pockets of the farmers, thus accelerating trade.

Concentration, according to the British consul-general, himself a big banker in Frankfort, consequently in a position to know, is still a leading characteristic of German industrial life. This is most pronounced among the iron industries. Not satisfied with their position of dependency in the past upon the coal people, the iron workers are trying to get hold of coal mines and coke works. What this is to mean hardly needs explanation. The little people among the iron men are protesting against these combinations, complaining that competition is out of the question, etc.

PRICE OF FOOD.

One great evil in the Empire, one that will call for the most careful consideration, is that of food. A policy persistently followed, in favor

of the farming population, has put the prices of foods and food products so high that it is seriously questioned whether the Empire is not to be heavily handicapped thereby.

"We do not intend to express any opinion on these statements of the consul-general," says the chamber of commerce of Birmingham. "We regard them as statements based on observation and not the mere personal opinion of the consul-general. On the other hand, we would point out that while it may be that the cost of living may be proportionately greater in Germany than in this country, yet it is certain that employment is better in the former than in the latter. The rate of wages in Germany is less than in this country, but it is more than probable that the average aggregate wages over a number of workmen is higher. In other words, the general condition of the working classes in Germany is better than it is here. There are less unemployed; there is less poverty. Whether this condition of things will last is of course another matter, and may be highly speculative; but without knowledge of the acuteness of the German, of his methods and his foresight, we can not think that he will refuse to obey the dictates of experience or to adapt himself to the prevailing economic conditions, whatever they may be."

MACHINERY TRADE ACTIVE.

BUSINESS WAS NEVER BETTER THAN IN THE YEAR 1905.

Consul-General Richard Guenther, of Frankfort, reports that the manufacture of machinery in Germany has increased at a rapid rate, especially during the last half of 1905. He says:

In the whole field of machinery manufacture employment at fair wages was steady. The erection of new manufacturing establishments and the enlargement of existing ones, gave the machinery industry many orders. Both the automobile and rubber industry have increased rapidly and could not keep up with the demand. In the steam-engine branch competition by gas and electric motors was keenly felt, although employment was adequate and the prospects for the coming year are good. In transmitters the sales were large, although a number of foreign firms have permanent offices in the city, which cut into the sales of home manufactures to some extent. The manufacture of condensed-air tools and machinery has assumed great proportions, and the prospects for 1906 are such that large additions are planned to existing works.

The volume of business in the manufacture of milling machinery has increased considerably over the previous year. A trust of the large German establishments try to regulate prices and terms. Employment in the factories of ventilators and centrifugal pumps has been good, many firms working night shifts. There are more than fifty firms in Germany manufacturing centrifugal pumps. In the sewing-machine industry competition has become very keen. In order to take advantage of the old tariff rates work during the second half of 1905 was very brisk. Trade in bicycles was good, especially in the cheap grades. In the electrical industry business was fairly satisfactory. Wages showed an upward tendency, being 10 to 15 per cent higher than in 1904. Work in the industry of electric lighting, trans-

mission of power, etc., was good, especially in the last half of 1905; so, too, in the manufacture of electrical measuring instruments and all electro-technical articles.

IMPORTANT BAVARIAN BUREAU.

COMMERCE, MANUFACTURES, AND LABOR TO BE CARED FOR.

Consul W. Bardel, of Bamberg, reports an important move on the part of the Bavarian Government for the establishment of a bureau for dealing with the questions connected with commerce, manufactures, and labor. He writes:

The Bavarian foreign office has now a bureau of commerce, industry, and labor, which is to gather statistics on important social and economic matters. It is to consist of three independent branches: (1) For industry and commerce; (2) for labor; (3) for protection and insurance of wage-earners. It is not to conflict with the work of the eight chambers of commerce that now represent the commercial interests of the eight Bavarian provinces. It is to assist and advise, however, in the negotiation of new trade treaties. It is to look after the improvement of river and canal traffic, and to regulate the proper keeping of holidays; also to take special interest in the training and educating of help for the trades, and in the erection of trade colleges of all kinds, particularly of a commercial university. It is to examine into the hygienic and social conditions of the working classes, the safety in shops and factories, etc. It is also to encourage all kinds of exhibitions at the proper time and in proper places.

For the work of the three branches of this bureau about 40 men from all parts of the kingdom are to be selected, 24 by the different chambers of commerce, boards of trade, and workingmen's organizations. The directors of the two industrial museums of Bavaria, the president of the polytechnical society in Munich, two professors of university, the heads of the geognostical branch of the bureau of mining and of the hydrotechnical bureau, one prominent electrician, and about six men leading in commerce, industry, and labor will be called upon to convene whenever the minister of the exterior shall consider it advisable. The positions of all these men are honorary ones. They will be allowed traveling expenses and a limited amount for board while in session, but no salary.

FOREIGNERS IN THE UNIVERSITIES.

EFFORTS OF GERMAN STUDENTS TO DISCRIMINATE AGAINST OUTSIDERS.

Consul J. J. Brittain, of Kehl, calls attention to a movement, started this time by German students, to exclude foreigners from the Empire's universities. At times manufacturers, fearful of the competition that might ensue from the training of outsiders in German methods, have sought to have laws enacted that would either exclude foreigners or make it so hard for them to enter as practically to exclude them from the universities. Consul Brittain says:

This year German students are again demanding an increase in matriculation and tuition fees for foreigners who attend German uni-

versities. They say preference should be shown the German students in assignment of places in laboratories and recitation halls. After they have been accommodated they are willing that foreign students may take what places remain. German students are endeavoring to have all their universities unite in discriminating against foreign students. The number of foreign students at the German universities has increased rapidly. During the summer semester which has just closed there were 3,888 foreign students matriculated; last winter there were 3,555; last summer (1905) there were 3,178, and ten years ago the number was 2,196. The total number of all students matriculated at German universities was 44,942 for the summer semester 1906. Ten years ago the foreign students numbered 7.4 per cent of the total number, at present 8.6 per cent. Of the 960 students studying medicine at Berlin 360 are foreigners, or 37 per cent. At the Heidelberg university 23 per cent of those studying medicine are foreigners, and of those studying mathematics and science 22 per cent are foreigners.

IRON WARDROBES EXPORTED.

A German firm is achieving success in the sale of wrought iron wardrobes. They are supplied in four different sizes. The great advantages the wardrobe possesses are extreme durability, convenient ventilation and cleaning, and easy of transportation. The door is made of wire netting, and as the top slopes obliquely the contents are visible at all times.

LEAD IN CHEMICALS.

PRODUCTION THIS YEAR OVER THREE HUNDRED MILLION DOLLARS.

The importance of the chemical industry of Germany is evident by the statement of the London Commercial Intelligence that Germany produces annually a million tons of sulphuric acid and half a million tons of soda.

As to pharmaceutical products, the quinine alone exported from the Fatherland is valued at about \$3,333,000, and antipyrine and antifebrine at an equal amount. The colors, acids, and chemical manures exported are valued at about \$166,000,000. "One may then assert without fear of contradiction," said a manufacturer in speaking of the results achieved, "that to-day Germany furnishes five-sixths of the dyes used in the whole world."

The secret of German success lies in the fact that they have an army of scientific men from which they are now reaping the benefit of years of work and expenditure. At one plant alone no less than 190 chemists work all the year in search of new products. The advantage of combination is also stated by a German chemical manufacturer, who merged his interests with another factory and effected great savings. Thus the two factories do not compete abroad. One has branches at Lyon and Riga, the other at Creil, Moscow, Augsburg, and Milan. One of the factories gave up the production of acids and salts, securing them from the other where they were produced much cheaper.

A competent authority states that the 9,000 factories and 200,000 workmen engaged in the chemical industry of Germany will this year turn out products of which the value will be about \$357,000,000, and that the value of chemical exports will probably establish a record.

And yet this industry is scarcely thirty years old. In fact, a German manufacturer stated that "thirty years ago England was mistress of the market for salt and alkalies, as well as for coloring matter extracted from coal tar; to-day Germany is at the head of all the manufacturing nations of the world, not only for dyes but for chemical and pharmaceutical products."

FRANCE.

INTRODUCING REFRIGERATORS.

SUCCESSFUL TRIAL OF AMERICAN MAKE IN SOUTHERN FRANCE.

Vice-Consul A. Piatti makes a report from Nice on the use of refrigerators, which had been very limited in southern France, but is now becoming more general, owing to the increase in the manufacture of ice, with the resulting reduction of its price. Mr. Piatti writes:

Up to the present such use is confined to private families, as large refrigerators are articles which, in the present condition of the trade, would be very expensive. They are, therefore, practically unknown. The refrigerators sold at Nice at present are of the most primitive type in all respects and resemble those sold in the United States half a century ago, and for such as they are represent a very expensive article.

With catalogues at hand, and unable to induce inquiring dealers to purchase a sample lot, I prevailed upon a private party who appeared interested in the matter to bring over a sample lot of five of various sizes and qualities. An account of the result will, better than aught else, indicate the conditions existing.

The five cost, f. o. b. at New York, about \$60. The freight direct to the dock at Nice was about \$30, and the duty another \$30, making the total cost of the five \$120, or an average of \$24 each. On arrival it was found that, owing to careless packing, some damage had been done to the outer woodwork and varnishing, and this was repaired at once. The refrigerators themselves were a revelation to the importer, and the fact was established that the article sold here could, in no sense of the word, be compared to the new arrivals.

COMPARISON HARDLY POSSIBLE.

In the first place, those on sale here are in no way built on scientific principles, nor do I think that they make any pretense of having any special system of isolation, of ventilation, or of furnishing a maximum of cold air with a minimum consumption of ice. As to their appearance, the American article is a handsome piece of furniture, while the one in use here looks very little better than an ordinary packing box. Comparing the matter of cost is not an easy matter, because an article that might be compared with the American refrigerator does not exist at any price, and to-day could not be had unless specially ordered from a cabinetmaker. To illustrate: The smallest of the five mentioned above was 42 x 26 by 18 inches and its share of the total cost was certainly not more than \$14. I take this to be the smallest current size in the United States, while the corresponding size here is an article

26. x 20 by 16 inches and which is retailed at \$20. Comparing the two in appearance and without taking at all into account the practical superiority of the American article, any expert would declare the value of the latter to be not less than \$50, taking as a basis of valuation the price of \$20 of the former.

It should be added that by exporting in larger lots a reduction of first cost, as well as of freight and attendant charges, could be obtained, and also that the facilities for a direct bill of lading to Nice contribute to placing this article in the position of competing with absolute success with any other of the kind to be found in this market. In fact, I may assert, that once introduced here, any other sold in this part of France up to the present time, would be practically unsaleable at any price, and I would commend this fact to the earnest attention of American manufacturers.

ADMITTING DOCTORS.

REGULATIONS FOR PRACTICE OF MEDICINE, SURGERY, AND DENTISTRY.

Consul-General Frank H. Mason, of Paris, in compliance with instructions, reports as follows concerning the laws which govern the practice of medicine, surgery, and dentistry in France:

These statutes have been revised and enacted during the past fifteen years, and as they include also the regulations which govern the qualifications of nurses and the practice of midwifery, they are exceedingly elaborate and comprehensive. They are comprised within three general statutes, enacted on November 30, 1892, July 25, 1893, and a governmental decree dated February 14, 1894. I translate herewith the sections which embody the general spirit of the law. They are as follows:

No one can practice the profession of medicine in France until he shall be provided with the diploma of doctor of medicine issued by the French Government, after examination of the applicant before a superior school of medicine of the State. No one can practice the profession of dentistry in France until he shall be provided with a diploma of doctor of medicine or of a surgeon-dentist. The diploma of surgeon-dentist will be conferred by the French Government after studies accomplished in accordance with a regulation prescribed by the superior council of instruction and prescribed examinations undergone before a superior school of medicine of the State.

Physicians, surgeon-dentists, and midwives of whatever nationality who may have received diplomas in other countries can not exercise their profession in France until they shall have obtained respectively the diploma of doctor of medicine, surgeon-dentist, or midwife. Special exemption from the prescribed studies and examinations may be granted by the minister in conformity with a recommendation formulated and prescribed by the superior council of public instruction, but in no case can such exemption, accorded for obtaining a doctorate, include more than three of the prescribed studies and examinations.

The course of instruction for a surgeon-dentist is prescribed as follows:

Studies in view of obtaining the diploma of surgeon-dentist extend over a period of three years. Applicants must produce when first entering their names either a diploma of bachelor, a certificate of studies covered by decrees, or a certificate of superior primary studies. They undergo, after being entered the twelfth time, three examinations on the following subjects:

First, elementary anatomy and physiology; anatomy and physiology specially applied to the mouth. Second, elementary pathology and therapeutics; pathology special to the mouth; medicines; anæsthetics. Third, clinic; dental affections and maladies relating thereto; operations; execution of a dental prosthesis. The examinations are held at the headquarters of the faculties and schools of medicine where

the dental courses are organized before a jury of three members, composed of surgeon-dentists, who are transitory, designated by the minister of public instruction. The jury is presided over by a professor of the faculty of medicine.

Dentists admitted from abroad and who wish to practice in France must undergo the examinations. They may, however, obtain a partial or total exemption from the studies on the recommendation of the consulting committee of public instruction.

These are substantially the requirements of the existing system, the effect of which is to restrict new candidates for licenses to practice medicine or dentistry in this country to men who have passed through a thorough course of study, clinical practice and examinations, an important portion of which must be undertaken and accomplished in France.

NEW CATTLE FOOD.

FRENCH FIND THAT WINE POMACE PRODUCES ABUNDANT MILK.

Consul John C. Covert reports that a short item that recently appeared in a Lyon paper on the subject of a new use for wine dregs is attracting considerable attention among French farmers.

After the wine is pressed out the pomace is generally used to make a kind of brandy called "eau de vie de marc," and then the residue was used as fodder for stock or as a fertilizer. A French farmer has been experimenting with this pomace and he announces that he has found a means of converting it into an excellent fodder for milch cows. He makes a compound consisting of 20 parts of sugar and 75 parts of pomace, thus forming a substance that the cows eat with great relish and which can be preserved three months. He says that after he has fed this mixture to his cows three days they gave 20 per cent more milk than before and that the milk was of a much better quality.

In discussing this subject in an agricultural paper a writer suggests that a larger quantity of sugar would produce still greater advantages. In fact he thinks that the yield of milk in France would increase by about one-fourth. There can be nothing deleterious to health from this milk and its quality is so improved that it is thought consumers will buy this milk in preference to any other. As this has been an unusually dry summer the farmers have seized upon this idea of a new fodder with avidity and expect that it will come to their rescue in a time of great need. A company has been organized at Clermont-Ferrand, with a capital of \$30,000, for the purpose of building a factory for converting grape pomace into cow feed. It is proposed that the new fodder will be in the form of oil cakes and will consist of chopped hay or straw, pomace, and molasses. They calculate that this season they will produce about 25,000,000 kilograms, equal, in round numbers, to 54,000,000 pounds.

BONDED STORES AT MARSEILLE.

The American commercial success at Marseille, France, by the use of bonded stores, not only for spirits, which can now be received in bond, but also for other goods paying heavy duties, such as teas, chemicals, medicines, bathroom and sanitary goods, etc., is pointed out by the president of the British chamber of commerce at Nice. He suggests that British exporters appoint an agent at Nice to likewise receive and distribute their goods and to keep the manufacturer in touch with the demand, the agent, however, also being sufficiently encouraged to push the goods sent to him.

FRENCH EXPORTS OF MOSQUITO NETTING.

Consular Agent Hans Dietiker reports that the textile industries of Caudry, France, were kept very busy during 1905. Very important orders for plain and mosquito netting were received from the United States and many European countries. On account of the rapidly increasing demand for this class of goods many new machines have been ordered and will be installed this year. The demand for all kinds of embroidery is also increasing so much so that manufacturers are adding to their facilities in order to satisfy the trade.

AUSTRIA-HUNGARY.**AMERICAN TRADE OPPORTUNITIES.****PRACTICAL SUGGESTIONS FROM THE VIENNA CONSULATE-GENERAL.**

That the Austrian market has never as yet been fairly tested by American manufacturers and merchants is the opinion of many competent observers of trade relations between America and Austria reports Consul-General W. A. Rublee, of Vienna, who writes:

American trade is not properly pushed in Austria as a rule, and results have been disappointing in many cases because business has been badly handled. One cause that impedes American trade in Austria is that much of it is done indirectly. American houses have for their European agents German or English firms, to whom is assigned Austria as part of their territory, and trade with this country is bound to suffer in such cases, both because the Austrian purchaser generally pays more when dealing thus indirectly and because the sales are not promoted as energetically as they would be if the American house was directly represented. Active, reliable, and wide-awake agents are always scarce, but they can be found also in Austria and it would pay American houses to find such agents and do a direct business.

Another cause that has hindered development of business in Austria is the lack of confidence shown by Americans in their dealings with Austrian merchants. Americans expect to sell against cash payments without granting the usual credit conditions. All reputable Austrian business houses can give sufficient guaranty to entitle them to the customary terms of credit, and business would expand very greatly if it were done on a reasonable credit basis. To compete with other commercial nations it is essential that equally favorable terms be made to purchasers.

MARKET FOR OILS, PAPER, ETC.

As an illustration of the opportunities existing to enlarge the sale of American goods in the Austrian market a number of articles may be mentioned that are already introduced, but that might be successfully handled in far larger quantities than at present. There is cotton-seed oil, on which the duty has been raised from \$2 per 100 kilograms (220 pounds) to \$8. It has been stated that this duty will prove prohibitive, but a considerable business can be done even with this tremendous increase in the tariff rate. In cotton-seed-oil cake and cotton-seed meal there is a special opportunity for increased trade, as all fodder is

becoming dear in Austria and a big business might be built up at this time if well handled.

Oil of turpentine is used in large quantities in Austria, and the American import could be greatly increased. The Russian article is sold, too, but its quality is inferior. There is a big demand for manila paper of American make used for insulation purposes. This paper comes to Austria principally via Germany, and the trade would be more advantageously conducted by direct sales. Lard can be placed on the Austrian market to a greater extent than at present by adopting more energetic methods for pushing its sales, as the consumers want it, and there is only need of reaching them. Copper ingots and copper plates are imported very largely via Germany. This trade could be considerably enlarged.

LEATHER GOODS AND OTHER COMMODITIES.

In leather and shoes there is a splendid possibility of building up a big trade. Very little American leather is sold direct to Austria, although there is already a big consumption of American leather, which comes indirectly. It is mostly handled by German or English houses. The business could be done more profitably and on a larger scale at first hand. The Austrians are becoming acquainted with the merits of American shoes, and there is plenty of encouragement for American manufacturers to enter the market more extensively.

Another article that might sell well in Austria is the American rubber tire for automobiles, if the quality and price were satisfactory. The size of the tires would have to be adapted to the requirements of European automobiles. The various oils used in the manufacture of soap will also find a good market. American butcher saws used for sawing the bones of animals are in good demand. American locks of all kinds for furniture and trunks would meet with a ready sale if well handled. American dental instruments come into Austria via Germany. This business could be developed by handling it directly. American lumber, especially pitch pine, mahogany, and palisander wood, could be sold profitably. Canned fish preparations and sardines might meet with a ready sale. Colophonium is used in large quantities, and imported via Germany principally. It could be imported directly with considerable advantage.

A UNION SALES HOUSE SUGGESTED.

The above-mentioned articles are a few instances to illustrate the present condition of American export trade with Austria. There is much more to be done than at present, and it depends on American exporters to devise methods to reach the Austrian market. It has already been suggested that one of the best methods to overcome the obstacles to a more rapid development of trade with Austria would be to establish an American house in Vienna for the purpose of promoting trade, such an agency to be supported by a combination of American manufacturers, none of whom wished an exclusive representation. With the right men in charge of such an agency there would be a bright prospect for expanding American trade. There are certain Austrian agents anxious to become associated with such an enterprise, and it would be well worth the attention of American export houses to look into the possibilities of such a proposition.

MARKET CHANCES.

OPPORTUNITIES FOR SALE OF CERTAIN AMERICAN GOODS.

Deputy Consul R. W. Heingartner, of Trieste, relates how an American article was recently introduced to the public of that Austrian city with great success. He also points out how some other commodities might be sold in the cities of the dual monarchy. Mr. Heingartner's letter follows:

An enterprising haberdasher of Trieste recently laid in a large stock of American imitation diamond jewelry, and made an attractive display of the different ornaments in his show window. The cheapness of this jewelry, its beauty and remarkable brilliance, have almost caused a sensation here, and the sidewalk before the haberdasher's window is continually blocked by an admiring crowd.

These imitation jewels are so well made and bear such a remarkable resemblance to real diamonds that people buy them freely, so much so that the merchant has, it is said, duplicated his order. The large sales of this jewelry are due to its cheapness and that it is American, which word always seems to give enhanced value to goods.

Unfortunately one rarely sees an article of American make in the shops of this city. Manufacturers here, realizing the appreciation which is attached to goods made in America, often print the American flag on their wares and the legend "Made in America." This is particularly the case with clothing-store articles, such as ties, collars, shirts, cuff links, etc.

The latest things in collars, ties, etc., must be ornamented with the American flag and perhaps the words "Latest American fashion." Although they are not made in America the manufacturers find that they sell better and are considered more stylish if people are made to believe they are of American make.

American suspenders are on sale to a limited extent, but they are of indifferent quality and very expensive. If some of the excellent American makes of suspenders were placed on sale they would meet with favor. European suspenders are clumsy and cost from 60 cents to \$1.

AMERICAN SHOES HARD TO SECURE.

Although American shoes are acknowledged to be the acme of the shoemaker's art, and locally-made shoes cost from 18 to 22 crowns (\$3.65 to \$4.47) per pair, American shoes are worn by very few persons in Trieste. One brand of these is feebly advertised, but the high price at which it sells—24 crowns (\$4.87) per pair—tends to limit the sale to a few dozen pairs a year. They are handled by only one dealer who receives them from Vienna.

A local shoemaker has tried to imitate American shoes, but with poor success. His work is heavy and clumsy, and lacks the beautiful shape of the comfortable American shoes.

It is certain that if a store were opened in Trieste to sell American shoes, or if a Trieste dealer could be induced to push their sale their use would increase to a surprising extent.

If they were imported directly, and not sent from Vienna as at present, they should cost much less.

There are so many articles of American make which could be sold in Trieste, if proper measures were taken to introduce them. The fact that the manufacturers of other countries find it worth their while to send their products here proves that American firms could do the same if they wished.

For instance, in all the bookstores of Trieste English books are on sale. An edition of Shakespeare's works, one play to a book, was noticed which sell singly at 2.40 crowns (\$0.49) per volume. Poe's and Longfellow's works are on the booksellers' shelves in English editions. English paper-bound books printed in England and Germany are also sold.

It is true that few English books are sold each year in a town like Trieste, but in cities much frequented by travelers the case is different. In none of the cities visited by the writer has he seen an American-printed book on sale. This branch of business should be as profitable to American as it is to English publishers.

This is also true of tobacco and pipes. English smoking tobacco and pipes can be found everywhere on the Continent, but the same of American origin are not to be had in these parts.

Many other articles of American make should be on sale in the stores of Austrian cities, whose markets await their proper introduction.

COUNTRY'S FOREIGN TRADE.

The foreign trade of Austria-Hungary last year shows an exceptionally large advance due principally, according to the British consul at Vienna, to the increasing exports of grain and manufactures, and the much larger quantity of food stuffs, chemical products, and machinery. The aggregate value of imports increased \$23,500,000 and exports \$20,000,000. The exports of cereals advanced 50 per cent and of cotton manufactures 30 per cent.

ITALY.

TRADE OF CATANIA.

SATISFACTORY INCREASE IN EXPORTS AND IMPORTS.

Consul B. F. Chase, of Catania, forwards a very interesting report on the trade of that important Italian port, which is as follows:

There has been a healthy increase in trade at this port during 1905. Exports have increased from \$6,707,620 in 1904 to \$6,903,058 in 1905. The imports for the same time were from \$5,044,147 to \$5,495,898. The exports to the United States and Canada increased from \$378,204 to \$381,625, or only \$3,421, while the imports therefrom increased from \$119,753 to \$241,104, or \$120,351. The trade of Canada is very small, and is not kept separate from that of the United States by the officials.

The United States furnished all the tobacco and paraffin and almost all the petroleum and lard, but has practically no trade in any other line. If the wheat lately tried had met with the approval of the macaroni manufacturers, it would have made a valuable addition to the American trade, but Russia seems to have the advantage. In the

matter of wood it is difficult for the United States to compete successfully with Austria, owing to the small expense in bringing the lumber from Fiume and other Austrian ports.

SULPHUR PRODUCTION—TRADE WITH AMERICA.

Sicily produces about 500,000 tons of sulphur annually, or 80 per cent of the entire production of the world. Two-fifths of the output is refined in mills at Catania, the principal port of shipment. The condition of many of the sulphur mines is not ideal from the standpoint of the laborer. Much of the sulphur is mined and put on the cars by contract, and the wages of the employees range from 14 to 34 cents a day. There also exists what are called company stores at which the employees must make their necessary purchases. The total shipments of sulphur from Catania in 1905 were 3,928,831,962 pounds.

One of the growing uses for sulphur is in the manufacture of bisulphide of carbon, and a new field has been opened for its use in the making of artificial silk, horsehair, and such products from wood pulp, as 1,000 pounds of the fabric made requires 750 pounds of bisulphide of carbon, to make which quite large quantities of sulphur are required.

The total export of almonds amounted to 101,737,350 pounds, and filberts, 48,240,104 pounds. The value of shipments of these two articles to the United States was: Almonds, \$203,946, and filberts, \$52,294. The value of lemons sent to the United States was \$54,236, and oranges, \$5,522.

The imports from the United States and Canada amounted to \$241,104; exports thither, \$381,625. The principal articles of import were: Tobacco, \$134,009; lard, \$28,163; petroleum, \$70,473; dried hides, \$6,172; dried fish, \$562; and paraffin, \$880.

WOMEN WARNED.

ITALY NOT INVITING TO AMERICAN WAGE-EARNERS.

Consul J. E. Dunning, in reply to an inquiry, warns American women, and men, too, for that matter, against going abroad on the basis of a superficial or unfounded belief that they can secure a livelihood by teaching English or acting as nurses.

He says there are cases in which Americans have secured positions in rich Italian families to teach English, but the cases are so rare as to warrant no one to rely upon them as indicative of possibilities, much less probabilities. In the first place, the wages paid by such people, even the very rich, are not high. Italian nurses are to be found in all the large Italian cities. The wages paid them in Milan, for example, are about \$1 a day. In Rome the rates run as high as in the United States. "A good governess," he writes, "more of the servant type, but a little above it, gets from \$10 to \$20 a month, but the latter (\$20) is a high price, seldom paid." Tutors and governesses must speak French—this is, in most cases, absolutely necessary. There are now schools in all the large Italian cities in which excellent English is taught, and it is taught in the public schools. Most of the middle-class tradespeople speak it, or will soon speak it, because of the ease with which they may acquire it. There are many students of music who exchange English for Italian.

On the whole, Consul Dunning would warn his country women and men from so precarious a course as is involved in trying to earn a living by teaching English to the Italians in Italy. He says the cost of living in Italy—such living as people are used to in the United States—is high, rents, food, and clothing running as high as they do at home, or even higher.

COMMERCIAL ARBITRATION COURT.

INTELLIGENT EFFORT TO SETTLE CLAIMS PEACEFULLY IN ITALY.

Consul Dunning also reports the establishment of a court of arbitration for the consideration and settlement of disputes among Italian commercial men. He writes:

There has just been organized in Milan a chamber of commerce for arbitration, which will aim to settle trade disputes and prevent strikes. It is composed of a council of 15 members who give their services free of salary and who were appointed by the founders of the chamber at their first sitting a few weeks ago. There is a president, two vice-presidents, a secretary and treasurer, together with as many members as desire to join it under the by-laws which have been adopted.

The council, which will handle all disputes referred to the chamber, may be convened on the written request of five members of the chamber by the president at any time. The expenses of each sitting will be charged equally to the parties who have applied to the chamber for a settlement of a dispute. Disputants will file with the chamber a written request for a hearing, whereupon the council will endeavor, by every means in its power, to bring about a friendly understanding. If it fails of success in this way, the council will seek to effect a settlement by choosing other arbitrators, outside the chamber, who will be favorably regarded by both sides to the issue. If possible, each party will be urged to select one arbitrator for itself, the chamber naming the third from its own roll of members. Arbitrators will sign a pledge to preserve silence and secrecy relative to the doings of the council or of themselves until the legal publication of the ultimate decision.

Before disputants may have their differences considered by the chamber they must declare that they will not, after a decision has been rendered and accepted by them, go to the courts for further action in the matter, ask for a rehearing in the council, or proceed in any formal way whatsoever. They must pledge themselves to support and carry out the terms and intent of the decision of the council, which is to be published within thirty days from the close of the hearing in any given case. Disputants must deposit, before the opening of the hearing, a sum of money sufficient in the opinion of the chamber to meet the costs of the sittings. A stated tariff of fees and charges has been arranged for the information of members and the public.

Though admittedly experimental the chamber has the indorsement of the progressive merchants of the city.

GROWING COMMERCE.

THRIVING BUSINESS THIS YEAR IN BOTH IMPORTS AND EXPORTS.

During the first seven months in 1906 the value of the imports into Italy was \$268,935,700, and of the exports \$202,166,470. In the

months of July and August the imports exceeded those of the corresponding period of last year by \$5,069,460, and the exports by \$972,450. The above figures do not include gold and coin.

This telegraphic statement from Rome further states that the remarkable increase of Italy's trade with foreign countries, already shown in the first half of the year, continued in the same degree throughout July. The principal increases in the imports during the first seven months of the year, compared with the corresponding period of last year, were: Cereals, \$6,253,200; machinery, \$5,944,400; coal, \$5,346,100, and raw cotton, \$3,030,100.

There were substantial increases also in the imports of maize, cloth, timber, surgical instruments, puddled iron, iron bars, rolled iron, oats, silk tissue, ships, raw rubber, wagons, etc. In exports there were the following increases: Raw silk, \$7,339,000; silk twist, \$273,000; cotton fabric, \$2,083,000; also in guns, motor cars, cheese, etc.

NORWAY.

CURING OF CODFISH.

METHODS USED IN NORWAY—AIR DRYING.

Consul-General Henry Bordewich, of Christiania, has made inquiries regarding investigations made by the Norwegian Government, relating to the curing of codfish without the use of preservatives, and makes the following report:

The officials and experts on these matters state that salt as a preservative is found absolutely necessary for the proper curing of codfish unless the fish is air dried, and that no other preservatives are found desirable or necessary. No noteworthy experiments with other preservatives have been made. A description of the methods employed by the Norwegians in curing and preserving codfish in different ways may be of interest.

The fish is caught in the winter and early spring on the northern and western coasts. When the boats and small steamers have entered harbor with their hauls the entrails and heads are removed, and the fish, as a rule, sold to dealers, who take them on board vessels or in packing houses built close to the seashore. The fish is sold and bought by count, regardless of size. Expert splitters, placed at benches about 2 by 5 feet and using a heavy, short, wide-bladed knife, make an incision along the lower or belly side, along the whole length of the fish, removing at the same time the upper half of the backbone.

The fish is then, without washing, put down in even layers in the holds of vessels or in packing houses, flesh side up. Over each layer is sprinkled salt by an expert salter; the so-called Trapani salt is preferred. Trapani salt is imported from Spain; it is a rather weak, small-grained, dull-colored article, evaporated from sea water. About 5 barrels of this salt is used for every 1,000 cod, and the net weight of each fish is about 1½ kilograms (3½ pounds). The sizes of the fish vary much, and the salter has to use considerable judgment in the quantity of salt used. If the supply is too liberal, the fish is apt to become salt burned; if too scant, it is apt to sour.

SPREAD OUT ON ROCKY SHORES.

When the desired number of fish, say 50,000 to 100,000, has been secured in one lot, the cargo is brought to some place where the rock formations close to the seashore are suitable for spreading such a large number for drying. As the cargo is unloaded each fish is carefully washed in clean sea water. The black membranous skin on the insides of the fish is at the same time removed, likewise all blood accreted in the bone cavities. Whenever the weather is suitable, clear windy weather being preferred, the fish is laid singly, side by side, on the flat rocks, and attended to by men, women, and even children. It is never exposed too long on the same side. Every two or three hours the fish are turned so that the flesh or lower side and the upper, skin-covered side are alternately exposed to the sun and wind. Every evening stacks are made of 50 to 100 fish and the top covered with tarpaulins and weighted down with stones. In this manner the fish becomes solid and gains in appearance. In unfavorable weather, with fog and rain, it is left undisturbed in the stacks, but as soon as fine weather comes on it is again exposed. This is repeated till the fish is thoroly cured and ready for shipment.

The curing is done in the months of May and June, before warm weather sets in. It requires constant care and good judgment to bring the curing process to a satisfactory termination. If the fish is exposed too long to the sun it will scorch and turn dark; if there happens to be much foggy weather or rain its value will be much decreased by the influence of a certain fungi. To prevent this no remedy has as yet been discovered.

Fish ready for export is either piled in the hold of ships in layers or packed in bundles, each holding a certain weight, but of late years some of it is also shipped in tin-lined boxes when destined for a long voyage and warm climates.

AIR-DRIED CODFISH.

Codfish is also put up in Norway without the use of salt or any other preservatives. Some of this fish is dried round after simply removing the head and entrails. In this method the fish are tied together by the tails in pairs and hung on horizontal wooden poles resting on beams about 8 feet above the ground. The fish preserved in this way are caught in northern Norway during the regular fishing season, January to May.

The article is known to the trade as "stockfish," and is largely exported to Catholic countries. By ancient custom this kind of fish is never taken down for shipment before June 12 each year; sometimes later, if the weather has been unfavorable.

Cod and other fish is also air dried the whole year round, after having first been split open the whole length, the only junction between the two halves being the tails and about an inch of fish above it. By the cut the whole of the backbone is left on one side of the fish when split. Each fish is then strung on poles for drying in the same manner as the round or stockfish. Among the fish prepared in the latter manner are cod, ling, coalfish, torsk, and some other varieties.

ROUMANIA.

PETROLEUM PRODUCTION.

GROWTH AND EXTENT OF THE INDUSTRY—GREAT LATENT WEALTH.

On September 2 Thomas Ewing Moore, chargé d'affaires at Bucharest, joined in an excursion to the petroleum fields in the Prahova district of Roumania, and his report thereon, which follows, gives an idea of the value of this new source of Roumanian wealth.

Oil fields are found in different parts of the country. Their development is only in its infancy, but the results already obtained give every reason to believe that their extent and wealth can not be overlooked among the great petroleum producing countries. We were shown two wells which were said to have produced oil to the value of \$400 per day during the past two years. It is claimed that the Roumanian oil is superior to any known except that found in the United States. The quality is much the same throughout the country.

The Prahova fields were first exploited by the peasants of the district in the most primitive manner. Then foreign capital was introduced, and this rich field is now largely in the hands of a German company, with German banks of Berlin at its head. It has its own refineries at Campina, a village on the railway between Bucharest and the Hungarian border, situated about 4 miles distant. The oil is transported thither in pipe lines.

At the present time there are 104 companies and individuals engaged in this industry in the Prahova district, 4 in the Buzau, and 4 in the Bacau districts. During the year 1905 the total production of crude petroleum was 610,192 tons. The first six months of 1906 the quantity produced was 404,358 tons, a gain of nearly 100 per cent over the same period during 1905. Of the 404,358 tons of crude petroleum produced the first six months of this year 364,662 tons reached the refineries, and from this quantity 109,606 tons of illuminating oil, 53,499 tons of benzine, 21,900 tons of lubricating oils, and 167,282 tons of residues were manufactured. In 1905, first semester, the amount of crude petroleum sent to the refineries was 235,050 tons, so that the amount treated for the same period this year shows a gain of more than 50 per cent. The products of the crude petroleum treated in the first six months of this year amounted in percentages to: Benzine, 14.6 per cent; illuminating oil, 30 per cent; mineral oils, 6 per cent; residues, 46 per cent, making a total of 96.6 per cent; loss in process of manufacture, 3.4 per cent.

In 1904 the amount of crude petroleum (distilled) exported was 45,204 tons; in 1905, 49,515, and for the first six months of 1906, 18,387. In 1904 the amount of illuminating oil exported was 78,306 tons; in 1905, 118,136, and during the first six months of this year, 98,913. The amount of benzine exported in 1904 was 36,969 tons; in 1905, 46,697, and for the first six months of 1906, 34,016. Germany, England, and France are the largest importers of Roumanian petroleum products. The first six months of 1906 they imported the following quantities: France, 50,550 tons; England; 29,787, and Germany, 24,467.

BELGIUM.**EXTENT AND METHODS OF THE LEATHER INDUSTRY.**

Consul J. C. McNally writes from Liege that the tanning industry of Belgium is one of considerable importance.

Not only do they work the native skins but they import about 50 tons annually. Belgium contributes annually to this industry about 800,000 skins, which includes ox, horse, buffalo, kid, and sheep skins, and are imported chiefly from Argentine, Uruguay, Brazil, France, Holland, Germany, etc. Australia and South America send in sheepskins tanned as well as fleeces, which are clipped after arrival.

For the past several years chrome has been used for tanning with excellent success. The large hides are tanned with oak bark or the extracts of oak, quebracho, etc. Kid and sheep skins intended for fine work are treated with sumach; those for chamois-leather work are treated with fish oil, while dressed hides are tanned with alum and salt mixed with the yolks of eggs and flour. The materials for fine tanning work are produced in Belgium, such as oak bark and certain extracts. However, most of the materials required are imported. Sole leather is manufactured throughout Belgium, but the leading centers are Stavelot, St. Hubert, Laroche, Namur, Peruwelz, and Soignes. Strap leather is manufactured in Liege, Verviers, Herve, and other places adjoining. Skins for gloves are tanned at various places throughout the Kingdom.

About 60 establishments are employed in the dressing and dyeing of skins. The importation of hides into Belgium in 1905 were valued at \$20,573,800, of which amount those to the value of \$17,847,096 were for Belgian use, the balance passing to other countries. The exportation the same year aggregated \$16,008,447, of which \$13,273,557 worth was from Belgium, the balance passing through from other sources.

BULGARIAN PAPER MARKET.

A demand exists in Bulgaria for wrapping paper, states a Paris trade journal. Two kinds are used for packing raw silk exports: A heavy waterproof paper, brown on the inside and black on the outside, which is quoted at 12 to 13½ cents per pound, and a very light but strong glazed paper at 9½ to 10 cents. Other kinds of wrapping paper are also in demand, more especially light-brown paper with a rough surface, and smooth dark-brown paper. Most of the paper imports come from Italy. A large amount of cardboard is also used in Bulgaria in the manufacture of boxes for cocoons.

MALARIA BECOMES A PLAGUE IN GREECE.

The excessive prevalence of malaria in Greece is engaging the attention of English physicists. It is said to be checking the development of rural life, and is a very serious thing for the nation. The statistics of the country show that out of a population of 2,500,000 there were 250,000 cases of malaria annually, and the deaths were about 1,760. Last year the number of cases increased to 960,000, and the deaths to 5,916. Professor Savas, of the University of Athens, and physician to King George, is initiating a movement to deal with the plague.

ASIA.

CHINESE EMPIRE.

LARGE GROWTH OF FOREIGN TRADE.

REMARKABLE SHOWING OF THE EMPIRE'S COMMERCIAL CONDITIONS.

Consul-General James L. Rodgers, of Shanghai, forwards a long-desired, detailed table of the Chinese Empire's import and export trade. It is just such a table as will enable merchants and manufacturers to see from what countries the imports of China are brought and to what nations the Chinese sell. In addition to this the amount of each is recorded. The consul-general writes:

For the first time in the customs service of China a systematic and accurate analysis of the import and export trade of the Empire has been made, and as this gives in detail information which has been vainly sought, citation of its salient features should be given in any review of the country's trade. Not only does it serve its purpose there, but it will show for the benefit of American trade what the market in China is at present and our separate share in each commodity.

The value of the direct import trade from each country has been shown in a preceding table and, therefore, before the analysis of these imports, it only remains to refer briefly to the net consumption in the customs districts. Shanghai absorbs most, taking for her uses nearly 20 per cent of the whole; Tienstin is second, with nearly 15 per cent; Hankow third, with about 10 per cent; Niuchwang fourth, with about 7 per cent, and Canton fifth, with about 5 per cent. The other important districts, in their order of consumption, are Kowloon (which means Hongkong and Macao), Chefoo, Chinkiang, Chingwangtao, Swatow, Chungking, Kiaschow, Ningpo, Kiukiang, Amoy, Foochow, Weuchow, and Nanking. The remaining districts take only about 7 per cent of the whole.

HONGKONG'S MISLEADING STATISTICS.

In the analysis of both imports and exports the Hongkong figures, as usual, are embarrassing, since they utterly destroy the value of percentages and give false impressions. This will be better understood when it is stated that of the total value of the so-called trade with Hongkong—namely, imports, 148,071,198 haikwan taels, and exports 81,452,643; total, 229,523,841 (United States gold \$167,552,403.93)—it is estimated by the customs statisticians that at least 25 per cent belongs to America and should be credited there.

In the table which follows only the total value of the importation, America's share and that of the nation leading in the importation is

given, it being manifestly impossible in short compass to give further details. The values are given in the Haikwan tael, which is equivalent to 73 per cent of a gold dollar. The nations are indicated by their initials—A. standing for America or the United States, G. B. for Great Britain, H. K. for Hongkong, B. I. for British India, J. for Japan, I. for India, F. I. C. French Indo China, E. Europe, R. and S. Russia and Siberia.

ANALYSIS OF IMPORTS.

Articles.	Total imports.	American share.	Leading nation's share.	Leading nation.
Opium:	<i>H'kwan taels.</i>	<i>H'kwan taels.</i>	<i>H'kwan taels.</i>	
Benares	6,606,332	.....	6,029,252	H. K.
Malwa	12,988,721	.....	8,311,492	B. I.
Patua	13,786,486	.....	12,504,856	H. K.
Other kinds	938,108	.....	935,422	H. K.
Shirtings, gray, plain	20,073,264	1,270,444	16,818,661	G. B.
Sheetings, gray, plain	31,566,684	26,463,003	26,463,003	A.
Shirtings:				
White, plain	16,982,812	2,700	13,933,876	G. B.
White, fancy	38,818	.....	24,836	G. B.
Drills	14,115,459	11,273,404	11,273,404	A.
Jeans	3,758,230	1,201,145	2,261,455	G. B.
T-cloths:				
32 inches	3,474,570	27,360	1,977,242	G. B.
36 inches	513,866	.....	356,117	G. B.
Cambrics, lawns, muslins	302,400	.....	238,563	G. B.
Lenos, balzarines	240,423	.....	135,853	H. K.
Chintzes and prints	1,099,077	5,586	888,814	G. B.
Printed drills, etc.	826,942	.....	297,514	G. B.
Printed sateens, etc.	436,122	1,366	415,238	G. B.
Printed T-cloths	495,606	2,925	488,853	G. B.
Turkey red cottons, etc.	1,491,673	81	1,393,205	G. B.
Cotton Italians, etc.	15,564,685	42,197	14,024,207	G. B.
Shirtings, dyed, plain	772,888	.....	540,109	G. B.
Shirtings, H. K.:				
Dyed, plain	431,980	.....	420,338	H. K.
Dyed, fancy	261,820	.....	149,070	H. K.
Cotton, Spanish stripes	139,681	.....	74,855	G. B.
Cotton flannel	2,506,983	1,812,171	1,812,171	A.
Cotton flannel, striped	457,953	.....	255,449	H. K.
Fancy-woven cottons	261,873	.....	122,890	G. B.
Japanese cotton cloth	89,764	.....	52,575	J.
Japanese cotton crêpe	96,105	.....	68,623	H. K.
Velvets	643,329	.....	358,629	G. B.
Velveteens	90,313	.....	50,823	G. B.
Velveteens and cords	177,669	.....	166,379	G. B.
Cotton blankets	571,587	.....	296,645	E.
Handkerchiefs	385,355	.....	317,936	G. B.
Towels, etc.	279,688	.....	131,570	H. K.
Towels, ordinary	346,690	.....	296,691	J.
Cotton goods, unclassified	443,653	.....	268,451	G. B.
Cotton yarn	67,080,384	.....	24,425,474	H. K.
Woolen	27,487	.....	25,452	G. B.
Cotton thread:				
Balls	85,468	.....	57,950	J.
Spools	841,721	.....	355,143	G. B.
Alpacas, etc.	198,586	.....	121,880	H. K.
Union and poucho cloth	371,295	.....	318,282	G. B.
Union Italian cloth	239,764	.....	232,395	G. B.
Woolen and cotton flannel	67,540	.....	33,576	H. K.
Woolen and cotton mixtures	352,775	3,649	295,379	G. B.
Blankets, rugs	562,490	.....	227,594	G. B.
Bunting	7,965	.....	6,004	G. B.
Camlets	552,735	.....	324,425	G. B.
Cloth, broad, etc.	872,680	.....	637,198	E.
Woolen flannel	59,212	.....	31,567	E.
Woolen lastings	463,657	.....	393,057	G. B.
Long ells	436,615	.....	306,950	G. B.
Woolen, Spanish stripes	463,570	.....	333,002	G. B.
Woolen goods, unclassified	336,221	.....	161,807	G. B.
Woolen yarn, etc.	654,568	.....	347,155	E.
Canvas	220,480	87,453	94,526	G. B.
Gunny cloth	159,382	.....	148,037	H. K.
Linen goods	19,528	.....	16,841	G. B.
Plushes	586,108	.....	383,921	G. B.
Silk piece goods	1,186,122	.....	403,662	J.
Silk stripe cottons	12,226	.....	12,024	J.
Piece goods, unclassified	77,255	.....	49,653	G. B.
Brass, etc.	436,885	.....	274,733	H. K.
Brass wire	73,801	.....	40,515	J.
Brass goods, unclassified	139,856	.....	128,959	H. K.

ANALYSIS OF IMPORTS—continued.

Articles.	Total imports.	American share.	Leading nation's share.	Leading nation.
	<i>H' kwan taels.</i>	<i>H' kwan taels.</i>	<i>H' kwan taels.</i>	
Copper:				
Shapes.....	724, 892	657	338, 261	J.
Molded.....	21, 951, 712	14, 779, 595	14, 779, 595	A.
Wire.....	52, 341	38	26, 539	J.
Unclassed.....	9, 023, 392		5, 861, 084	J.
Iron; soft steel:				
Forgings.....	63, 407		51, 024	G. B.
Bars.....	637, 968	3, 902	313, 717	E.
Castings.....	8, 578		1, 654	G. B.
Cobbles.....	321, 559	55, 765	182, 293	E.
Hoops.....	176, 418		116, 314	G. B.
Railroad.....	733, 199		474, 909	E.
Nails.....	771, 214	158, 048	296, 473	E.
Pig, etc.....	93, 069		70, 795	G. B.
Pipe.....	117, 286	1, 380	91, 740	G. B.
Plate cuts.....	779, 570		457, 066	G. B.
Ralls.....	589, 063	10, 260	543, 666	G. B.
Sheets, etc.....	503, 466		259, 710	G. B.
Wire.....	253, 094		193, 606	E.
Unclassed.....	268, 236	2, 804	152, 578	G. B.
Scrap.....	1, 500, 645	11	863, 762	G. B.
Iron:				
Galvanized.....	790, 451		739, 016	G. B.
Wire.....	50, 693	1, 829	31, 670	H. K.
Lead, pigs, bars.....	734, 438	127, 130	446, 457	H. K.
Lead, tea, sheet.....	14, 258	1, 234	10, 454	G. B.
Nickel.....	146, 367	2, 091	105, 425	E.
Quicksilver.....	118, 293		118, 293	H. K.
Spelter.....	310, 087		188, 754	E.
Steel, rolled.....	421, 868		187, 083	E.
Steel, tool, wire, etc.....	159, 036		117, 214	G. B.
Tin, slabs.....	2, 330, 306		2, 198, 245	H. K.
Tinned plates.....	1, 065, 344		737, 650	G. B.
White metal.....	325, 966		197, 066	E.
Zinc.....	61, 938		35, 429	E.
Metals, unclassified.....	575, 332	2, 484	287, 225	J.
Bags, all kinds.....	2, 200, 908		1, 886, 300	H. K.
Betel nuts.....	273, 088		212, 696	H. K.
Bêche de mar.....	1, 262, 045		596, 998	H. K.
Birds' nests.....	722, 632		445, 063	H. K.
Books, etc.....	371, 135	26, 747	171, 403	J.
Boxes, fancy.....	211, 564		162, 419	E.
Braid, Llama.....	668, 213		474, 223	E.
Bran, rice.....	1, 923, 398		1, 918, 337	H. K.
Building material.....	370, 853	9, 616	128, 460	G. B.
Butter and cheese.....	377, 452	31, 534	158, 617	E.
Buttons.....	494, 911		316, 177	E.
Candles.....	1, 476, 262	33, 865	1, 233, 725	G. B.
Carpets.....	85, 423	77	64, 431	G. B.
Carriages, bicycles.....	221, 538	38, 742	111, 002	G. B.
Cement.....	558, 419	1, 506	450, 890	H. K.
Charcoal.....	199, 648		191, 275	J.
Chemicals.....	297, 165	11, 269	151, 615	J.
China ware.....	575, 052	7, 809	310, 728	J.
Cigarettes.....	4, 427, 171	2, 203, 636	2, 203, 636	A.
Cigars.....	381, 466	8, 639	247, 741	H. K.
Clocks, watches.....	923, 541	40, 547	431, 040	E.
Clothing.....	1, 298, 129	191, 902	284, 614	H. K.
Spices.....	383, 557		345, 399	H. K.
Coal.....	7, 564, 645		5, 190, 867	J.
Coke.....	199, 073		119, 952	H. K.
Cordage.....	213, 276		124, 864	H. K.
Cotton gins.....	130, 245		129, 605	J.
Cotton, raw.....	1, 631, 035	198, 862	609, 584	I.
Cutlery.....	204, 624	5, 459	112, 492	E.
Dyes, etc.:				
Vegetable.....	211, 167		164, 322	H. K.
Cinnabar.....	208, 014		208, 014	H. K.
Aniline.....	2, 626, 545	524	2, 204, 804	E.
Indigo, artificial.....	1, 726, 950		1, 388, 238	E.
Indigo, vegetable.....	386, 086		381, 949	H. K.
Sapanwood.....	95, 818		95, 786	H. K.
Vermillion.....	259, 331		257, 301	H. K.
Unclassed.....	365, 808		167, 965	E.
Colors, unclassified.....	119, 868		84, 116	E.
Paints, paint oil.....	574, 220	24, 163	299, 505	G. B.
Electrical material.....	490, 818	31, 139	231, 893	G. B.
Elephant's tusks.....	204, 476		187, 304	H. K.
Enameled ware.....	544, 599	6, 837	405, 996	E.
Palm-leaf fans.....	205, 036		204, 886	H. K.
Fish and products.....	10, 509, 784		7, 585, 235	H. K.
Flour.....	3, 945, 690	493, 282	3, 022, 586	H. K.

ANALYSIS OF IMPORTS—continued.

Articles.	Total imports.	American share.	Leading nation's share.	Leading nation.
	<i>H' kwan taels.</i>	<i>H' kwan taels.</i>	<i>H' kwan taels.</i>	
Dried fruits	381,931	8,639	351,122	H. K.
Furniture and material	928,161	57,430	288,059	G. B.
Ginseng	2,436,792		1,506,614	K.
Glass	706,283		466,891	E.
Glassware	850,203	7,374	319,363	J.
Glue	136,301		98,600	H. K.
Ground nuts	1,148,873		1,137,403	H. K.
Haberdashery	639,570	5,352	326,606	G. B.
Hardware	892,144		347,973	G. B.
Hemp	188,865		106,911	H. K.
Hides	182,292		163,168	H. K.
Deer horns	85,097		48,555	H. K.
Rhinoceros horns	121,101		119,951	H. K.
Hosiery	584,455	279	261,002	E.
Isinglass	358,466		283,375	J.
Jadestone	385,791		359,669	H. K.
Jewelry	239,649	27,340	110,562	E.
Lace and trimmings	160,911		103,214	G. B.
Lamps, etc.	735,144	13,523	333,182	E.
Leather	1,588,250	142,141	1,317,481	H. K.
Leather manufactures	277,456	5,361	82,899	G. B.
Lung-Ngans	174,193		169,508	H. K.
Macaroni	687,220	2,264	618,732	H. K.
Machinery	5,383,363	404,524	2,802,383	G. B.
Matches	5,609,457		4,391,750	J.
Match material	279,304	5,882	131,152	J.
Mats	390,963		348,633	H. K.
Medical appliances	232,929		80,979	G. B.
Medicines	2,003,441		1,490,698	H. K.
Condensed milk	800,059	330,987	330,987	A.
Morphia	166	14	102	E.
Mushrooms	732,584		405,714	H. K.
Needles	672,648		619,502	E.
Engine oil	332,566	260,575	260,575	A.
Kerosene	20,799,398	10,210,413	10,210,413	A.
Paper by quantity	2,422,440	12,126	973,372	J.
Paper by value	662,020		256,501	J.
Pearls, real	207,963		117,129	I.
Pepper	760,465		582,292	H. K.
Perfumery	268,209	27,048	142,280	E.
Photo materials	259,360	27,687	134,045	G. B.
Printing materials	99,115	18,334	34,918	G. B.
Railway material	7,347,989	449,247	3,288,011	E.
Rattans	694,389		546,887	H. K.
Rice	8,544,971		8,023,599	H. K.
Saltpeter	566,585		508,454	H. K.
Sandalwood	880,528		717,601	H. K.
Seaweed	1,349,488		1,195,000	J.
Seeds	345,755	1,138	317,392	H. K.
Ship material	21,007	4,230	8,000	E.
Boots and shoes	621,778	25,670	406,042	H. K.
Ribbons, silk and cotton	651,674		552,322	E.
Furs	272,990		120,451	G. B.
Soap	1,618,189	27,263	748,020	G. B.
Soda	589,299	12	545,526	G. B.
Stationery	684,794	57,088	249,990	G. B.
Household stores	2,901,401	700,550	700,550	A.
Marine stores	484,167	56,936	256,736	G. B.
Brown sugar	7,467,122		6,292,842	H. K.
Sugar candy	1,613,291		1,152,412	H. K.
Sugar, refined	8,335,468	46,474	7,270,629	H. K.
Sugar, white	5,710,177	526	4,977,918	H. K.
Sulphur	63,190		38,181	H. K.
Tea	3,354,741		2,626,809	J.
Telegraph material	641,797	66,581	267,747	J.
Thread-metal imitation	186,043		128,654	E.
Hard-wood timber	843,030		402,165	H. K.
Soft-wood timber	2,315,100	1,419,722	1,419,722	A.
Tobacco	1,656,668	805,897	805,897	A.
Tobacco sundries	168,728	8,527	42,894	J.
Toilet articles	215,880	6,803	130,356	J.
Toys	157,724	2,483	66,518	J.
Umbrellas	667,790		408,029	J.
Varnish	122,078	1,622	102,203	H. K.
Aerated waters	112,048	387	30,649	E.
Beer and porter	882,605	106,892	368,563	E.
Spirits	1,497,481	77,788	744,722	E.
Wines	1,122,938	13,458	626,041	E.
Woods	648,645		461,050	H. K.

POSITION OF HONGKONG.

A glance at the tabulated statement above will show even the most casual observer what a confusing part Hongkong plays in such statistics. To that port is credited 68 firsts and when considering the matter on the basis of production there should be only one—that of dyed shirtings. The absurdity of such an anomaly in statistics is made apparent by a single illustration—that of flour. Hongkong is credited with an importation to the value of 3,022,586 haikwan taels and America only 493,282; yet perhaps over 80 per cent of Hongkong's flour came direct from America for transshipment and most of the remainder from Australia. It is useless to comment further on this feature and one must remain content with the hope that some day a process can be devised in the interest of trade statistics by which Hongkong will be treated as she should be—a port of transshipment essentially and perhaps entirely.

The placing of European countries under one head—that of Europe, excepting Russia—was adopted by the customs for the reason that it has been hard to trace importations, and furthermore, there has been no basis of comparison heretofore. However, of the first places assigned to Europe in the analysis, Germany is easily the leading nation in nearly all these importations, her proportion of the whole importation of 31,595,674 Haikwan taels being over 48 per cent. The comparison, such as is afforded with previous years, shows certainly that Germany's trade in China is increasing steadily, and especially in such lines as machinery, metals, and novelties.

However, the true value of the analytical statement from an American point of view is, as has been stated before, to give the schedule of imports, so that any American manufacturer can get an idea of the market and observe his country's participation in it.

In only eleven items is America first; what would be the result if the Hongkong importations could be justly assigned can not be stated, but it is certain that there would be a gain for the United States. In cotton goods, oil, copper, tobacco and products, household stores, and timber, we seem only to have drawn upon our surplus, while our showing in other things, and especially manufactured articles, is lamentably small. Many a conclusion somewhat disadvantageous to American enterprise can be drawn from these figures, but they practically tell their own story and will doubtless suffice. In the following table the Empire's export trade is analyzed, the values being stated in Haikwan taels, each worth about 73 cents of United States money. The countries are designated by initials the same as in the preceding report.

ANALYSIS OF EXPORTS.

Articles.	Total exports.	American share.	Leading nation's share.	Leading nation.
	<i>Haikwan taels.</i>	<i>Haikwan taels.</i>	<i>Haikwan taels.</i>	
Alum, white	61,369	.....	28,101	H. K.
Aniseed	131,282	.....	131,276	H. K.
Bamboo manufactures	974,838	.....	652,277	H. K.
Bean cake	6,188,347	.....	6,177,064	J.
Beans	6,931,876	.....	5,569,938	J.
Bones	130,688	.....	124,730	J.
Bran	466,125	.....	448,336	J.
Bristles	2,555,610	679,138	896,672	G. B.
Camphor	363,868	.....	347,171	H. K.
Cassia lignea	1,036,909	.....	1,034,408	H. K.
Cattle, etc.	3,210,100	.....	2,877,889	H. K.

ANALYSIS OF EXPORTS—continued.

Articles.	Total exports.	American share.	Leading nation's share.	Leading nation.
	<i>Haikwan taels.</i>	<i>Haikwan taels.</i>	<i>Haikwan taels.</i>	
China root	87,457	.....	65,315	H. K.
Chinaware, etc.	1,721,474	.....	1,159,279	H. K.
Cigarettes	474,743	.....	300,042	K.
Clothing	1,812,258	16,082	1,209,498	H. K.
Coal	85,329	.....	62,240	H. K.
Raw cotton	12,029,326	.....	11,284,892	J.
Curiosities	168,968	.....	52,970	G. B.
Albumen	466,982	67,616	368,638	E.
Eggs	1,544,607	.....	665,795	H. K.
Fans	468,941	.....	375,313	H. K.
Feathers	911,418	7,264	457,776	H. K.
Fireworks	2,972,256	.....	2,856,195	H. K.
Fish and products ..	1,164,337	.....	877,859	H. K.
Fruits	1,671,992	.....	1,273,301	H. K.
Fungus	339,708	.....	334,025	H. K.
Galangal	22,890	.....	22,846	H. K.
Glassware	334,468	.....	325,572	H. K.
Gold and silverware ..	201,544	.....	195,857	H. K.
Grass cloth	1,259,586	.....	733,180	K.
Ground nuts	394,160	.....	301,565	H. K.
Gypsum	30,376	.....	16,588	H. K.
Hair	825,313	124,005	301,481	G. B.
Hats, rush	59,154	3,811	26,730	H. K.
Hats, chip	30,611	813	19,843	G. B.
Hemp	2,352,007	188,362	1,287,344	J.
Hides	4,995,749	.....	2,910,545	E.
Horns	72,910	.....	34,791	E.
Deer horns	105,579	.....	97,175	H. K.
Joss sticks	395,782	.....	177,091	H. K.
Lard	667,076	.....	390,727	H. K.
Leather	396,751	.....	382,827	H. K.
Dried lilies	296,957	.....	295,144	H. K.
Licorice	195,388	.....	148,908	H. K.
Mats	929,809	.....	593,107	H. K.
Matting	3,129,330	.....	3,123,426	H. K.
Medicines	2,111,616	1,379	1,875,825	H. K.
Antimony	269,503	14,012	125,682	E.
Pig iron	665,577	1,350	659,787	J.
Quicksilver	28,626	.....	28,626	H. K.
Tin slabs	3,441,547	.....	3,436,435	H. K.
Musk	428,448	129,056	173,833	E.
Nankeens	1,523,588	.....	1,020,275	H. K.
Nutgalls	834,087	140,696	588,890	E.
Bean oil	3,637,361	491,675	2,658,552	H. K.
Oils, essential	458,624	.....	385,303	H. K.
Opium	1,328,216	.....	1,292,743	F. I. C.
Paper	3,551,634	3,091	1,244,421	H. K.
Pearls	125,975	.....	116,381	B. I.
Preserves	129,705	.....	70,659	H. K.
Provisions	2,474,703	1,966	1,940,939	H. K.
Rhubarb	156,087	24,851	49,049	E.
Safflower	3,903	.....	3,643	J.
Samshu	717,317	.....	510,936	H. K.
Apricot seed	239,094	.....	228,009	H. K.
Cotton seed	554,564	.....	554,563	J.
Melon seed	202,623	.....	193,616	H. K.
Rape seed	77,475	.....	45,215	J.
Sesamum seed	2,349,746	.....	1,541,490	E.
Seed cake	646,448	.....	629,913	J.
Silk, raw:				
White	13,524,010	3,968,136	6,910,443	E.
Yellow	3,866,402	.....	1,818,274	E.
Filature	27,395,999	3,960,105	17,848,318	H. K.
Silk raw, wild	8,639,062	1,551,404	4,536,751	E.
Silk cocoons	1,344,286	.....	633,377	J.
Silk waste	4,288,525	30,655	1,849,469	H. K.
Silk cocoons, refuse ..	555,817	.....	555,363	E.
Silk piece goods	8,897,627	24,548	7,098,082	H. K.
Silk pongees	1,041,123	64,582	389,745	H. K.
Silk, unclassified	841,211	.....	703,962	H. K.
Skins, furs, rugs	9,684,286	4,108,544	4,108,544	A.
Straw braid	6,210,688	925,982	2,640,529	G. B.
Sugar, brown	1,907,512	.....	1,725,429	H. K.
Sugar candy	2,861	.....	2,371	H. K.
Sugar, white	284,114	.....	281,636	H. K.
Tallow, beef	31,796	.....	22,324	H. K.
Tallow, vegetable	633,682	46	507,825	E.
Tea, black	12,721,213	1,251,884	5,216,073	G. B.
Tea, green	8,292,474	3,671,650	3,671,650	A.
Tea, brick	4,253,018	31,947	3,454,435	R., S.

ANALYSIS OF EXPORTS—continued.

Articles.	Total exports.	American share.	Leading nation's share.	Leading nation.
	<i>Haikwan tael.</i>	<i>Haikwan tael.</i>	<i>Haikwan tael.</i>	
Tea, tablet.....	123,980	.....	94,228	R., S.
Tea dust.....	54,967	.....	52,799	R., S.
Timber.....	1,135,246	.....	512,040	H. K.
Tobacco.....	2,312,713	.....	1,578,980	H. K.
Varnish.....	343,894	.....	322,724	J.
Vermicelli.....	1,377,962	.....	1,245,975	H. K.
White wax.....	248,790	.....	240,623	H. K.
Camel's wool.....	674,630	2,047	659,729	G. B.
Sheep's wool.....	6,070,157	4,932,644	4,932,644	A.

Of the total exports, 227,888,197 haikwan taels, Hongkong is credited with receiving to the amount of 81,452,643 taels, or over 35 per cent of the whole. So, as far as Chinese statistics are concerned, that amount of export disappears. It is more than probable, however, that the percentage belonging to America is about the same as in imports.

Like the analysis of the imports, this as to exports tells its own story. It is to be regretted that further figures showing the contribution and distribution of the important articles of Hongkong commerce can not be given, since by such amplification more light could be thrown upon the ever increasing competition for China's trade.

GERMANS ACTIVE.

GOOD WORK IN DEVELOPING TSINGTAU AND ITS TRADE.

John Edward Jones, American consul at Dalny, Manchuria, sends an interesting report in regard to the city of Tsingtau, which is under German control, as follows:

Tsingtau boasts a number of hotels where one may find suitable quarters with good food from \$50 to \$75 gold per month. There is a fine beach hotel located at the bathing beach where many of the visitors from neighboring ports go during the heated term. Germany maintains a garrison at Tsingtau, and many of the surrounding hills are fortified. Long-distance gun practice takes place every day. And there is yet another feature that is to be most heartily commended. The authorities have been conducting a department of forestry since their occupation, with the result that the barren hills of a few years ago are now covered with young forests. Millions of young trees have been set out, and the work has been taken up by the Chinese, who are planting trees themselves under the supervision of the German authorities.

Just outside the city the Germans have built a village for the Chinese. It is a model of its kind, with broad streets and small but well-constructed brick houses. There are regulations in force over there which require the city to be kept clean, and they are obeyed. The Chinese have plenty of breathing space and there is no crowding, with the attendant evils of bad sanitation. A fine market space is set aside, and here the farmers come every day to display and sell their wares.

The health of the city is always good. Strict hygienic methods are enforced by the naval governor of the city. The city is surrounded with beautiful drives, and everything bears evidence of the strictest care. Recently the Germans have opened a European school, and

Europeans for many miles around take advantage of the excellent course and training and send their children to Tsingtau.

There is a model abattoir at Tsingtau, presided over by a competent veterinarian, who examines all cattle brought in for slaughter. The abattoir is much larger than the present requirements of the community and is fitted with all modern appliances. The most scrupulous cleanliness prevails. A model truck farm and dairy also add to the comfort of the people.

COMMERCE AT TSINGTAU.

Quite a flourishing business is being done at Tsingtau. The country is so new commercially that her exports up to this time are not very large; but she is growing every year, as is attested by some figures furnished by the Government.

The imports have increased from \$10,900,000 gold in 1904 to \$16,200,000 gold in 1905, while the direct exports to foreign countries approximated during 1905 \$3,000,000 gold, nearly trebling the amount exported for 1904. The general increase in exports was the feature of the year, which heretofore has been a weak point in the trade of the port. Among these, two staples appeared for the first time in quantities—coal and bean cake. These give great promise of future development. Another and perhaps most important, since the business has been done directly with the United States, is the exportation of straw braid. This staple has, with the assistance of the railway, been diverted from other ports in China. The total exports for the year has been 41,417 piculs (about 5,508,461 pounds). In 1903 it was 9,696 piculs (about 1,189,568 pounds), while in 1904 it aggregated 25,383 piculs (about 3,375,939 pounds). Tsingtau has now become the principal market for straw braid, and the trade of Tsingtau and Chefoo have suffered accordingly. The railway has been largely responsible for this. It reaches the very best territory for this material and what with its excellent harbor offers exceptional advantages not shared by other ports.

A mint for the coinage of copper 10-cash pieces has been opened by the Shangtung government, and much of the copper used for this purpose is imported from Japan in ingots. For 1905, 15,000 piculs (about 1,995,000 pounds) were imported.

During 1905 there was a brewery established, which is exporting its product to various ports, a soap manufactory, and a tannery.

CUSTOMS, SHIPPING, AND RAILWAYS.

The German Government has recently decided to restrict to the harbor the "free area" which hitherto comprised the whole of the German territory and, therefore, necessitated frontier and railway control by the customs. The additional customs convention concluded on the 1st of December, 1905, is now in force. Customs control of the railway traffic outside of the free-port territory and of the frontier has ceased. Merchandise leaving the free-port territory pays import duty according to the general tariff and is then free to go anywhere into the country without restriction. The German Government reserves 10 per cent of the duties as a contribution to the expenses of the territory, the amount being subject to revision every five years.

A total of 400 steamers and 6 sailing vessels, aggregating 422,673 tons, entered the port of Tsingtau during the year. Of these, 327 steamers and 6 sailing vessels arrived with cargo and 73 steamers came with ballast. During the year 399 steamers and 6 sailing vessels cleared, of which 315 steamers left with cargo and 84 steamers and 6 sailing vessels in ballast. As compared with the previous year this shows an increase of 55 vessels of 37,616 tons. During the year 1,238 foreigners and 3,988 native passengers arrived, and 1,206 foreigners and 4,253 natives departed. By rail there were 123,393 arrivals and 135,176 departures, as against 92,198 arrivals and 100,921 departures in 1904.

The Shantung Railway did a prosperous business during the year, having conveyed 30,300 tons of goods and 795,000 passengers, which is an increase of 65 per cent in point of freight and 42.5 per cent in passenger traffic over the preceding year.

The Shantung Mining Company is also progressing, raising 134,000 tons of coal during the year. The opening of the "Annie Pit" during the year greatly increased the production. There are 2,000 Chinese employed at the main diggings, and their pay averages from 200 to 400 "cash" per day (20 to 40 cents gold). They work in shifts of eight hours.

THE FLOATING DOCK—THE SILK INDUSTRY.

The floating dock, of which mention was briefly made in the early pages of this report, is capable of taking in vessels of 16,000 tons capacity. During the year 1905 the dock took in and repaired eight war and merchant vessels of a combined tonnage of 14,644 tons. The dock is fitted with the most modern appliances for lighting with an electrical supply operated from a central station so that work may be carried on during the night. A steam plant is also provided that vessels in the dock may be heated during the winter. The workshops are fitted for all kinds of work, and two cranes of 20 tons capacity each are available. The docking rates differ according to the size of the vessel, from 40 cents Mexican (about 20 cents gold) per ton for a 500-ton vessel to 20 cents Mexican (10 cents gold) per ton for a vessel of 6,000, tons up.

The silk industrial establishment, which gives practical experience to the graduates of the sericulture schools, is in full operation, and its products find a ready sale. At present it employs about 650 hands. The majority of the laborers have had training in the sericulture schools and execute very good work. The exportation of silk during the year 1905 was a disappointment. This was due in large measure to the low prices prevailing in Shanghai, and much of the silk which otherwise would have come to Tsingtau was sent by junk to Peking and Manchuria.

The Germans are looking forward with great expectations to the results from the two new silk schools established in Tsingchow and Changihisen, which are reported to be doing well and turning out a considerable number of skilled hands whose work will tell in the immediate future. Quite a business is done in peanut oil, although the yield for 1905 was not generally bought, and a considerable amount still remains on hand.

GINSENG AT HONGKONG.

THE PRICES RECEIVED FOR AMERICAN ROOTS.

Consul-General Amos P. Wilder, of Hongkong, in response to numerous American inquiries as to the trade in ginseng, with especial reference to the cultivated root, prices, and importations, reports as follows:

The ginseng business is largely in the hands of the Chinese, the firms at Hongkong and Canton having American connections. [The five leading Hongkong Chinese firms in the ginseng importing business are named by Mr. Wilder, as also the leading "European" importing concern, and all the addresses are obtainable from the Bureau of Manufactures.] I am authorized to say that American growers may correspond with the European concern direct relative to large direct shipments. They receive goods only on consignment and have some forty years' standing in this industry. This firm, as do the Chinese, buy in bulk and distribute through jobbers to the medicine shops, which abound in all Chinese communities. The Cantonese have prestige in cleaning and preparing the root for market.

Last year the best quality of ginseng brought from \$2,000 to \$2,300 Mexican per picul (equal to 133½ pounds), but selected roots have brought \$2,400 to \$2,550. It is estimated here that growers should net about \$7.25 gold per pound. The buying price of ginseng is uncertain. There being no standard no price can be fixed. The American-Chinese shippers have the practice of withholding the ginseng to accord with the demand in China. Owing to failures among Chinese merchants since the war and the confusion in San Francisco, trade in this industry has been slack and prices have fallen off. If the root is perfect and unbroken, it is preferred. Much stress should be laid on shipping clean, perfect, and attractive roots. Size, weight, and appearance are factors in securing best prices, the larger and heavier the root the better. When the shipment arrives the importer invites jobbers to inspect the same. The roots are imported in air-tight casks in weights of about 100 pounds. It is certain that there are many different qualities of ginseng and the price is difficult to fix, except on inspection in China.

As to wild and cultivated roots, two or three years ago when cultivated ginseng was new buyers made no distinction and the price ruled the same; but having learned of the new industry, experts here assure me the roots can readily be distinguished. They say that the wild root is darker in color and rougher. The wild is preferred. Experts now allege a prejudice against the cultivated root, affirming that the wild root has a sweeter taste. The cultivated roots being larger and heavier, they first earned large prices, but are now at a disadvantage, although marketable. The cultivated is as yet but a small percentage of the entire importations, but is increasing. Seventy-five per cent of all importations are in the hands of the Chinese. Small growers in America will do best to sell to the collecting buyers in New York, Cincinnati, and other cities. Hongkong annual importations are now about 100,000 pounds.

The imports of ginseng at Hongkong during the past ten years have been as follows, for twelve months ending June 30:

Year.	Piculs.	Year.	Piculs.
1897	946½	1902	890
1898	1,208	1903	826
1899	1,231	1904	827½
1900	1,065	1905	880½
1901	983	1906	766½

CHINESE MOTTOES ON GOODS FOR CHINA.

Mr. Albert Halstead, consul at Birmingham, England, calls attention to a British consul's report in which his countrymen are advised to place a Chinese motto of good import on the boxes, bags, packages, etc., that contain goods destined for sale in China. The British consul sent a supply of mottoes of the right kind in Chinese characters to the British Board of Trade. American consuls in China and American merchants might well take a hint from Mr. Halstead's report.

JAPANESE AT TIENTSIN.

STEADY EFFORTS TO SECURE COTTON-GOODS TRADE.

Consul-General James W. Ragsdale furnishes from Tientsin a report on the Japanese commercial operations in north China, especially relating to the textile trade, as follows:

The figures of Japanese trade at this port are accurate, as it is a direct trade. Japan first entered the commercial arena of the East after the China-Japan war, and took an ever increasingly important part therein, until checked in a slight degree by her war with Russia. Already this year she has to her credit a tonnage far greater than that for any previous year, save 1902 and 1903, and she promises to eclipse all annual records before the twelfth month is run. In 1891 only 11 Japanese ships entered Tientsin with a tonnage of 8,560 tons. In 1903 the figures were 171 ships with 162,558 tons burden. The recent war interfered with Japanese shipping, but the restoration comes with a renewed vim, the figures being for the first six months of 1906, 107 vessels entered Tientsin and of a total burden of 133,008 tons.

Japan did not enter the shirting trade at Tientsin until 1898, when the sales amounted to 120 pieces, which in 1903 increased to 8,222 but declined in 1905 to 2,640. In sheetings she entered this market in 1895 with small sales, increasing them to 46,404 pieces in 1903 and 208,856 pieces in 1905. The sale of drills was nothing in 1894, 113,840 pieces in 1903, and 89,267 pieces in 1905. The first sales of crimp cloth is recorded in 1903, with 46,158 yards, and 45,250 yards in 1905. Japanese cotton blankets were also entered in 1903 for the first time, the number being 3,438, and 5,439 in 1905. The towel trade began in 1894 with 6,057 dozen; it amounted in 1903 to 50,353 dozen and in 1905 to 163,987 dozen.

The cotton-handkerchief trade showed a decline from the high-water mark of 22,277 dozen in 1902 to 1,924 dozen in 1905. Cotton umbrella goods also showed a decline, the Japanese sales here in 1902 being

42,761 pieces, and only 11,189 pieces in 1905. These figures, as a whole, show how thoroughly Japan in only her infancy of industry has become a competitor for Chinese trade.

JAPANESE PROSPECTS AND METHODS.

However, Japan's entrance into the piece goods-markets and the increase in her sales have been entirely a matter of the price of her products and their quality. It is in no way comparable with the English and American goods, and her ability to make further gains will rest upon the advantages of her proximity to the market and her plentiful supply of cheap labor. Yet a significant trend is to be observed in the steady rise in the prices of Japanese goods during the later years of the past decade. Take, for example, the T-cloths, quoted at 1.48 haikwan taels in 1896, 2.32 in 1899, and 3.84 in 1902 (tael=80.1 cents).

One way in which the Japanese are going to secure and hold an appreciable element of the Chinese trade is through their ability to come here and open retail stores on an equal competitive basis with the Chinese themselves. Such they are now doing in Tientsin, and with their high sense of what appeals to the eye they are generally able to make their displays much more attractive to the purchasers than are the native merchants. Moreover, they have among their household supplies many small articles, which should gradually win their way into the Chinese domestic economy, and which can be laid down here at prices well within the range of their usefulness. These sales will help to give stability to their business and make possible the introduction of other goods that compete with western exporters. This participation in the retail trade, as well as the general commercial progress, accounts very largely for the boom in building and in general development which is now so evident in the Japanese concession.

GROWING TIMBER TRADE.

One very important item of the Japanese trade does not appear under a separate heading in the customs figures. It is their timber. Already this year 20 steamers have come laden entirely with logs, railroad ties, and mine poles, which Hokkaido, the most northern of the large Japanese islands, floats down her streams to supply the attractive market in this country, which has used up its timber. An idea of the relative importance of this trade is evident by the fact that 14 of these steamers, whose accounts were closed before July 1, paid duties aggregating 20,623 taels, or more than one-eighth of all the duties—import, export, coast trade, and tonnage—credited to the Japanese flag during the six months. Almost daily lighters may be seen unloading their cargoes along the Japanese water front in the junks or to form rafts for transportation inland, while considerable quantities are also landed for local consumption.

CHINESE LIGHT-HOUSE SERVICE.

FURTHER IMPROVEMENTS BEING UNDERTAKEN BY AUTHORITIES.

The extension of the Chinese light-house service is noted by a Shanghai correspondent of the London Times.

Among the many and great services rendered to China by the Imperial maritime customs administration, not the least has been the

provision of a first-class system of lights and other aids to navigation on the coast and navigable rivers from Hainan and Formosa in the south to Newchwang in the north. The list of the new lights in hand or projected for immediate execution is as follows: A sixth-order light for a rock near the Bogue Forts, Canton River; a large steel gas-lighted light-ship for the Yangtze; a fourth-order group-flashing light for Tungting Island (Chusan Islands); a first-order group-flashing light on Chelang Point, and two fourth-order group-flashing lights and one fourth-order occulting light for the channel between Fuchau and Wenchau.

The coast and rivers in China are divided into seventeen districts, in each of which the lights are officially under the local commissioner of customs. The Shanghai and Ningpo districts are controlled by the coast inspector's office at Shanghai; south of Ningpo by an inspector stationed at Amoy; while Shan-tung and the Gulf of Pechili are worked from Chifu and Tientsin. Inspection and victualing work are done by steam tenders and by the revenue cruiser fleet. Sites for new lights are chosen by the engineer in chief and coast inspector in consultation, and the estimate submitted to the inspector-general. Local expenditure is defrayed by the commissioner of the port concerned, while contracts for lanterns, etc., required from abroad are put up for tender in London by the customs secretary residing there. Most of the lanterns and optical apparatus have been supplied by Birmingham and Paris firms. There are practically no fixed lights on the coast. All the new revolving lights are floated on mercury and provided with incandescent petroleum burners.

PASSPORTS IN MANCHURIA.

DELAY IN OBTAINING THEM—JAPANESE AND RUSSIAN RAILROADS.

Consul-General Thomas Sammons, of Newchwang, calls attention to the conditions under which passports are granted by the Chinese Government to persons contemplating trips through Chinese territory, and also relates the progress being made toward opening certain railways in Manchuria. He says:

The initial passport, issued here under the regulations announced by the Chinese military administrator, under date of July 16, last, authorized an American business man, to proceed from this port to Vladivostok, via Liaoyang, Mukden, and Harbin. Under the regulations, applicants must give their names, nationalities, ranks, occupations, routes, destinations, and objects of journeys. In case the Kwangtung (Port Arthur) Japanese governor-general headquarters and the Russian Far East army headquarters (Harbin) comply with a request, a passport issues, written in Japanese and French, from the Japanese side, and in Russian and French, from the Russian side. About two weeks' time was required in securing the initial passport.

For the further information of those interested it may be stated that the Japanese authorities hope to have the railway from Chong-tu-fu to Kwungchentze, to connect with that part of the Chinese Eastern Railway under Russian control in northern Manchuria, repaired, remodeled, and in readiness to be operated in harmony with the narrower gauge lines of the same original system now under Japanese

control in southern Manchuria during the latter part of September or early in October next.

The arrangements for Russian and Japanese railway stations at Kwungchentze have not been announced, but it is anticipated that in addition to having to change cars, on account of the difference in the gauge of the lines under the operation of the two countries, there may also be separate stations. The question of the possibility of ultimately establishing a through-train service and the utilization of a similar railway gauge by both the Japanese and Russian lines in one, it is believed, the recently appointed Japanese Manchurian railway commission will consider.

OPENING HUNAN PROVINCE TO TRADE.

For the foreign settlement at Changte, which the Chinese Government proposes to open to foreign trade, a site has been selected on the river bank about four-fifths of a mile from the city. Siangtan is also to be opened to foreign trade. The British consul at Changsha states that when these two commercial centers of Hunan Province are open and accessible to steamers all the year round the foreign trade of the province will increase by leaps and bounds. Steamers already run to Siangtan three months of the year. Hemp will probably become the chief article of export.

CHINESE OPIUM RESTRICTION.

An imperial Chinese edict has been issued expressing the determination to eradicate the evil effects produced by the widespread use of opium. The Throne now orders the abolition of the use of opium within ten years, and commands the council of state affairs to draft the requisite regulations giving effect to the decree, and to bring about the necessary restriction of the cultivation of the poppy.

JAPAN.

INDUSTRIAL ENERGY.

BUSY SUPPLYING SAN FRANCISCO WITH CEMENT.

Consul-General Henry B. Miller forwards from Yokohama a number of Japanese newspaper reports giving information concerning important industrial movements there as follows:

The cement industry has greatly revived, the demand increasing in home, Manchurian, and Korean markets, while large orders have been received from San Francisco. The Osaka Cement Company, though working night and day, is unable to keep pace with the demand. The present capacity of the works is 13,000 barrels a month, and it is proposed to increase the plant to obtain an output of at least 250,000 barrels per annum. The necessary machinery has been ordered, the extension to be completed by the end of October.

COTTON GOODS' RECORD.

The total production during last half-year [January-June] of cotton fabrics---shirtings, cotton drill, twilled cotton, thick cotton, etc.—by

Japanese spinning and weaving companies amounted to 71,168,497 yards, an increase of 8,822,750 yards, as compared with the first half of last year, and of 21,063,487 yards compared with the figures for the corresponding period of 1904. This increase is attributed to the all-round increase of looms. A remarkable decrease, however, is noticeable in the production of cotton drill, thick cotton, and kokura ori, a material used for soldiers' uniforms. The production of cotton drill during the first half of 1904, when no orders were received from the army, amounted to 1,810,000 yards, thick cotton to 2,136,000 yards, and kokura to 89,000 yards, and the production of these stuffs in the last half-year was about the same. The increase this year is chiefly represented by shirtings, flannelettes, and coarse cotton.

It has been decided by Tokyo and Kobe merchants to establish a silk and cotton spinning company with a capital of \$1,750,000 gold. The promoters include two Chinese. When \$1,400,000 of the capital is paid up the new company will inaugurate its business.

FLOUR ENTERPRISE JAPAN-RUSSIA STEAMSHIP SERVICE.

For the new Imperial Flour Manufacturing Company, the capital of which is \$250,000 gold, Mr. Kobei Abe was recommended for president. It is reported that there is a suggestion by some foreign capitalists that they will furnish additional capital if desired, but it is said that the new company will not increase the capital until after seeing how the business progresses.

The Russian Eastern Asiatic Steamship Company, which recently opened the Tsuruga-Vladivostok regular line, were scheduled to inaugurate a regular line between Vladivostok, Hakodate, and Otaru on August 25, making Hakodate the starting point. Four large steamers will be employed and four or five trips will be made a month.

DEVELOPMENT MOVEMENTS REQUIRING MACHINERY AND SUPPLIES.

The directors of the Hokkaido Tanko Railway Company are planning to erect an iron furnace after the purchase of the railway by the Government. The coals of the company's mines are well suited for the manufacture of iron, and as the locality extending from Poronai to Muroran abounds in iron sand, the quality of which has been ascertained to contain 80 per cent to 90 per cent of pure iron, according to Rear-Admiral Yamanouchi, who lately visited the island, the director has inaugurated a scheme to set up an iron factory.

It has been known for some time that there are considerable deposits of iron sand along the coast of Volcano Bay in Hokkaido. It has now been ascertained that in all the rivers flowing into the bay there are also immense deposits of iron sand along the banks. The iron is free from sulphur and phosphorus impurities.

DEMAND FOR WIRES AND CABLES—JAPANESE MINES.

With the immense development of electrical enterprises in Japan the demand for copper wires and cables is increasing daily, and the Furukawa Copper Mining Company has decided to establish a new factory for the manufacture of copper wires at Nikko, the present factory being found to be inadequate to meet the demand. According to the latest report the total output of copper wires from their works amounts to 300,000 to 400,000 kin (kin = 1½ pounds) per month, which is chiefly supplied to the various cable manufacturing companies

of Tokyo and Yokohama. The majority of the covered wires and cables used by the department of communication is imported from abroad and the native manufacturers are said to be contemplating a cable factory on a very extensive scale.

Although there have been a great number of mines in Japan offered for the exploitation of foreign concerns, no deal has been made as yet. The great difficulty experienced up to the present in coming to terms between the parties was the fundamental change in the system of mining. A certain English syndicate, it is reported, has decided to work two or three mines as soon as the engineers arrive in Japan next month.

HIGH PRICE OF LAND—RAILWAYS AND LUMBER. *

After the conclusion of the Chino-Japanese war the price of land in Tokyo rose to an unprecedented rate, chiefly owing to the high rates of the bonds and shares, which induced the moneyed people to invest in real property and helped to influence the rise. Quite a boom is experienced at present in Tokyo, where land is fetching exorbitant prices. It is customary, according to the report of the land agents, to have many deals in land in the winter season, and it is predicted that at the end of the current year the prices of land will rise a great deal more.

According to the Peking treaty the lumber business on the banks of the Yalu is to be a cooperative enterprise of Japanese and Chinese. It has been decided to establish a cooperative company with a capital of 2,500,000 yen (yen=49.8 cents), to be equally divided between the two nationalities. As soon as the conditions, which have been forwarded to the Chinese Government by the foreign office, are accepted the Government proposes to appoint a special inauguration committee similar to that of the South Manchurian Railway Company and proceed with floating the company.

The Ishikari Tanko Railway Company covers a length of about 120 miles through the coal and lumber districts in Sorachi, Kashinai, and Shinyubari. The Government has, it is reported, decided to grant permission for the construction of the railroad for the special use of the company and not under the jurisdiction of the tracks regulations.

TEXTILE TRADE.

INCREASED IMPORTATIONS—BRITISH DOMINATION.

Consul Hunter Sharp, in his annual report, describes Japan's efforts to extend her textile trade. The following excerpts from the report will surprise many, particularly those who have not been keeping pace with the great industrial movements in the East. The consul writes:

During 1905 business in the standard classes of cotton textiles was, upon the whole, satisfactory. Out of a total importation amounting to \$4,264,236, Great Britain supplied \$3,925,693 worth, the principal items being gray shirtings, \$1,453,180; satins and Italians, \$662,410; prints, \$562,384; white shirtings, \$363,765, and umbrella cloth, \$286,224. The United States furnished only \$57,820, of which \$53,271 was duck. Germany's share was \$175,704, of which flannel amounted

to \$110,642. In addition to the trade in cotton goods for Kobe there was an importation into Osaka of \$205,408 in 1905, against \$83,936 for 1904, the principal articles being gray and white shirtings, satins and Italians, and umbrella cloth.

The vast difference between the trade of Great Britain and the United States is a matter which American cotton manufacturers might well take into consideration. American cotton goods could find extensive and ready sale if proper efforts were made to meet the requirements of the market. At present they are too heavy, or of too good a quality, lighter and less expensive goods being in demand. The imports into Kobe of the principal cotton fabrics are shown in the following comparative table:

Description.	1904.		1905.	
	Quantity.	Value.	Quantity.	Value.
	<i>Yards.</i>		<i>Yards.</i>	
Italian.....	1,798,993	\$209,940	6,413,380	\$657,434
Mixed.....	9,409	2,478	695,064	130,798
Prints.....	2,771,616	233,259	7,667,872	595,433
Shirtings:				
Gray.....	10,283,003	551,682	35,865,359	1,453,180
White.....	2,002,371	131,565	6,882,284	373,796

WOOLEN GOODS.

In summer goods the season started late, but deliveries lasted till the end of June and only very moderate stocks were carried over. The import was small in designed goods, which at times sold at a premium. In winter goods business was restricted, high prices abroad and the "consumption tax" prevented buyers from speculation and overimport. There was a great scarcity of designed goods, but army cloth, meltons, and serges were imported in large quantities.

The imports of wool and woollen goods into Kobe were as follows:

Year.	Wool.		Yarn.		Cloth.		Other manufac- tures.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	<i>Pounds.</i>		<i>Pounds.</i>		<i>Yards.</i>		<i>Yards.</i>	
1904.....	6,070,133	\$1,103,281	754,667	\$319,715	449,296	\$190,476	.....	\$444,539
1905.....	8,434,000	906,181	990,267	447,191	3,108,968	1,894,518	.....	849,383

In wool and woollen goods the United States sends nothing to this market. Great Britain predominates in this trade, her shipments of cloth amounting to \$1,734,649. Germany comes next, contributing \$138,951. In wool and woollen yarns Germany takes the lead, and, with Great Britain, practically absorbs the trade.

Importation of mousseline-de-laine goods was practically monopolized by France, Germany, and Switzerland, and amounted to \$1,173,291, an increase of \$486,265 over 1904, in which year the imports were exceptionally small on account of the war and the imposition of a "consumption tax." Kobe occupies the foremost place in the receipts of mousselines for the Empire, the percentage being 77, against 75 in 1904.

IMPORTS OF COTTON.

The imports of ginned cotton into Kobe amounted to \$43,747,351, against \$30,383,337, an increase of \$13,364,013 over 1904. The imports of seed cotton were valued at \$623,613, against \$869,843, a decrease of \$246,230 from 1904. The importations, by countries, are shown in the following table:

Country.	Ginned cotton.		Seed cotton.	
	1904.	1905.	1904.	1905.
British India.....	\$13,261,798	\$23,387,656	\$56,495	\$744
United States.....	3,780,573	12,804,658		
China.....	12,090,422	6,163,327	209,147	33,852
Egypt.....	941,742	1,051,897		
French India.....	285,209	333,702	401,878	267,560
Siam.....	2,436	2,830	18,342	11,058
Dutch India.....	9,785	1,754	78,429	214,680
Straits Settlements.....			102,552	95,719
Other countries.....	11,372	1,527		
Total.....	30,383,337	43,747,351	869,843	623,613

Osaka also imported \$480,364 worth of ginned cotton, as against \$404,857 in 1904, but there were no imports of seed cotton.

EXPORTS OF COTTON YARN AND FABRICS.

The year 1905 was a most prosperous one for the spinning industry, the profits realized by the mills far exceeding those of a few years ago. Early in the year there was a heavy decline in the value of both American and Indian cotton, but notwithstanding the weak state of this market yarns continued to advance, with some fluctuations, until the end of the year. The exports of yarn from Kobe were valued at \$10,880,044, against \$10,465,989 for 1904, and from Osaka \$3,261,057, compared with \$2,008,085 for the same period.

The other articles from Kobe consisted of blankets, valued at \$69,530; flannels, \$278,816; gray shirtings and sheetings, \$115,394; T cloth, \$153,802; silk waste, \$327,722, and underclothing, \$710,875. There was also exported from Osaka flannels to the value of \$152,783; gray shirtings and sheetings, \$2,083,651; white tissue, \$1,051,244; drills, \$140,288; T cloth, \$395,890; blankets, \$182,038, and other tissues, \$579,904.

BRITISH TRADE DECLINES.

INCREASED COMPETITION AND ALLEGED DUMPING—AUSTRALIA'S HOPES.

The report of the British Consul at Nagasaki for the year 1905, recently issued by the British foreign office, calls attention to the general falling off of imports into Japan from the United Kingdom and her colonies, and asserts that it was mainly due to increasing competition. But he says that is not the only reason, and he alleges that the British trade suffers from "dumping."

He asserts that American flour is sold in Nagasaki cheaper than at the place of production, while American watches which cost in the United States \$1 can be purchased in Nagasaki for 75 cents. Those he says are two examples of the many. He says that if it were possi-

ble to deduct dockyard requirements from the totals given in the statistics it would probably be found that the import trade of Nagasaki has not kept pace with that of other ports. The war and its after effects are mainly responsible for the falling off in trade. With increased taxation and a general rise in the cost of living comes a curtailment in the demand for commodities not absolutely necessary. Those are among the reasons why the trade of that port has decreased, though, he says, there are undoubtedly other reasons. He says there is a noticeable deflection of trade to Moji, the explanation of which is not obtainable. There is at present no promise of new openings for the foreign merchant.

It may be well to add that the statement made by this British consul concerning American watches and flour has been denied by American exporters.

Mr. Suttor, the commercial agent of the New South Wales government to Japan, asserts that colonial business is welcomed in Japan because it is under the British flag. He says that Japan contemplates placing a contract for \$1,250,000 worth of rolling stock in New South Wales provided the price is suitable. The trade of Australia, and particularly that of New South Wales, with Japan went up with a bound in consequence of the war. In 1903 the exports from New South Wales to Japan were about \$350,000, nearly all of which represented wool. Nearly three-fifths of the increase was due to wool, but a considerable part was made up of food stuffs and animals. Australia he says is going to bid for the wheat and flour supply of Japan.

SITUATION IN KOREA.

The commercial conditions in Korea at present are summed up by the American Exporter as follows:

Korea may now be regarded as an adjunct of Japan, to which American and other foreign products will find their way largely through the importing houses in the Japanese ports. An American went to Korea with the intention of securing a concession to establish beet culture and the manufacture of sugar. The demand for sugar in Japan is considerable and continually growing, amounting in 1904 to \$11,500,000 in value. This enterprise would have provided a supply for the islanders, while it would furnish occupation for the Korean farmers. The project, however, was turned down at Tokyo. Beet sugar will probably be produced by the Japanese in Korea before long, for the soil and climate have been shown by the tests and experiments of the Americans to be well adapted to such culture, which is not the case in Japan, where the dampness is so great as to produce a watery sugar beet.

FORMOSA'S INCREASING TRADE.

Consul F. D. Fisher writes that the annual budget of the Formosan Government amounts to \$12,880,000, divided between ordinary expenditures, \$9,733,522, and extraordinary expenditures, \$3,151,528. The total increase is \$2,390,450 over 1905. Provisions were made for the completion of the railway line between Kilung and Takow at a cost of \$4,650,000, and for the completion of the Kilung harbor \$3,100,000. The total revenues for the fiscal year ending March 31, 1907, are estimated at \$12,885,050.

The total imports into Formosa for the year 1905 amounted to \$12,223,855, of which Japan furnished \$6,742,917, the rest of the world, \$5,481,938. The exports were valued at \$12,183,323, of which foreign countries took \$5,352,573 and Japan \$6,830,750. In 1904 the total imports were valued at \$11,373,160, and the exports at \$11,359,337.

DECLINE IN ORIENTAL TRADE.

UNITED STATES SIMPLY SHARES IN DECREASED SALES.

The alleged decline of American trade in the Orient this year is a theme of discussion in New York and London daily newspapers.

They point out that exports to China, Japan, and Hongkong fell from \$78,321,979 during the first seven months of 1905 to \$42,484,388 in the first seven months of 1906. Also that shipments to China dropped from \$37,181,220 to \$20,612,191, and shipments to Japan from \$36,800,468 to \$18,774,726.

The fact is entirely overlooked that abnormal trade conditions existed in the Orient in 1905. The cessation of the Russia-Japan war caused an influx of imported merchandise from both Europe and America too great for the consumption of the people. This excess overstocked the markets for 1905, and the natural result was the checking of imports, China and Japan buying less this year from all countries. The total amount of Japanese imports for the first six months of 1906 was \$108,534,191, a decline of \$30,873,319 from the first six months of last year.

That Japan's reduced purchases did not affect America alone is evident from British official figures. These do not yet show total exports to various countries, but exports are shown by commodities. In iron and steel manufactures Great Britain made new high-record strides in exports this year, yet her sales of these goods to Japan in the following lines (all that are detailed) fell off, the figures being for the first seven months of the respective years:

	1905.	1906.		1905.	1906.
Pig iron	\$565,750	\$364,885	Iron plates.....	\$113,409	\$107,442
Iron forgings.....	247,977	98,408	Galvanized sheets.....	1,044,776	784,435
Wrought iron	64,072	31,849	Bars and angles	690,644	639,817

In these items alone Great Britain's sales to Japan decreased by about \$700,000 for the first seven months of this year over those of the 1905 period.

The heavy end of China's purchases is in cotton goods, and Great Britain simply shared America's lot in reduced trade therein. The shipments of all classes of British piece goods to China and Hongkong from January 1 to August 1, 1906, totaled \$24,796,863, a decrease of \$2,905,962 from the same period in 1905. The American loss was somewhat greater, being \$5,533,083, the sales amounting this year up to August 1 to \$13,673,223.

With a boycott to contend with the showing is not so bad, especially considering that for the first seven months of 1904 the cotton cloth sales of the United States to the Chinese Empire and Hongkong

amounted to only \$3,667,968, when those of Great Britain totaled \$18,286,020. Thus the cotton goods sales of the two countries in China stood about 1 to 6 in favor of Great Britain in the 1904 period and 1 to less than 2 in the 1906 period.

INDIA.

PLANS FOR AGENCIES.

COMMERCIAL REQUIREMENTS FOR SALE OF MANUFACTURES.

There are two things, writes Consul-General William H. Michael, of Calcutta, of the utmost importance to American manufacturers and exporters in connection with trade in India, viz, the necessity of showing goods to Indian dealers, and furnishing goods suited to the Indian climate.

The climate of the lowlands of India attacks quickly anything that will mold, such as leather goods, any kind of table luxuries put up in sirups, confections, and medicines put up in tablets and sugar coated. In connection with whatever American manufacturers intend for India they should bear in mind this suggestion respecting the climate. More things mildew and mold here in India than almost anywhere else in the world. Articles made of steel or iron rust immediately on exposure to the air, and hence guns and cutlery should be treated in a way to prevent the insidious action of the salty and alkaline atmosphere from getting in its corrosive and destructive work.

Any kind of stationery that has mucilage in connection with it, such as gummed envelopes and wrappers, should be treated and packed in a way to prevent the dampness from causing the mucilage to adhere. Thousands of envelopes improperly gummed and packed are lost to shippers and dealers every year. The most careful attention should be given to packing.

When American manufacturers and exporters really get ready to take over their share of Indian trade they will be equal to all demands upon them. That is the habit of the American tradesman. There is one thing he will have to do, however, and that is to meet the requirement here for "agencies," where Indian dealers can go in person and "see" the goods Americans have to sell. This is the custom in India. Agencies and agents are to be found everywhere, and the bulk of the business is done in this way. This is made only the more necessary because manufactories are springing up all over India, and, hence, Indian-made goods may be seen on the spot. To compete with this growing condition our manufacturers and exporters will have to establish agencies where their goods can be seen to advantage. Every large city in India should have, and doubtless will have in time, agencies with large and attractive exhibits.

The sooner this suggestion is fully appreciated by American manufacturers and exporters and intelligently acted upon the better it will be.

GOVERNMENT MAKING QUININE.

SUCCESS IN INDIA SUGGESTS TRIAL BY UNITED STATES.

Consul-General Michael also thinks that it will be interesting to Americans to know that the Madras government of India is operating cinchona plantations on the Nilgiris, in the Madras Province, the product of which is converted into quinine at government factories. Mr. Michael continues:

'The total gross receipts from the government plantations this year was \$80,419, or a net profit of \$19,469. The three plantations are known as Dodabetta, Nedivattam, and Hooker, and are in a high state of cultivation. The crop of bark obtained this year was 294,000 pounds. This, together with 302,784 pounds purchased from private plantations, was worked up at the quinine factory owned and operated by the government. The amount of quinine produced from this quantity of bark was 16,328 pounds, besides 6,574 pounds of febrifuge. The private producers of cinchona in India have furnished bark to the government quinine factory since 1897, and during that time the number of pounds supplied was 2,386,505 pounds, valued at \$214,780.

GOVERNMENT SALES AND ENLARGEMENT PLANS.

The total sales by the cinchona department, after having given notice by advertisement to the public, of quinine was 17,446 pounds and 1,756 pounds of febrifuge. The price realized per pound for quinine varied from \$3.60 to \$4 and a fraction. The United Provinces, Burma, Ajmere, the medical depots, hospitals, and native states bought in bulk, while Bombay, Central Provinces, and Bewar took their purchases in quinine packets of 102 grains, at a little over \$4 per pound.

The total production cost of quinine to the factory was a trifle over \$3.20 per pound. The saving to the government in making its own quinine over what it would have to pay in the open market was about 40 cents per pound.

It is understood that the government will increase its manufactured output as soon as it can be done. The policy of the government in propagating the cinchona plant and manufacturing its own supply of quinine is, as I gather from conversation with officers of the government, twofold, first, to establish and encourage a profitable industry, and, second, to place the government—both Indian and British branches—in a wholly independent position as regards the supply of quinine, especially for the army and navy in time of war. The wisdom of this is emphasized by the American experience during the civil war, when the Federal Government was compelled to pay \$5 per ounce for quinine—or, indeed, any price that was demanded—while the Confederate States could get very little at any price.

WHAT UNITED STATES MIGHT DO.

The interest taken in the cultivation of the cinchona plant or tree by the English-Indian government, it seems to me, points a lesson to the United States. The pioneer work has been done by others and all that we have to do is to follow.

As is well known, the habitat of the cinchona tree is South America, where it was found in dense forests of the mountainous regions of the western parts of that country at a height from 2,500 to 9,000 feet above sea level and in an equable and rather cool climate. The belt in which the tree was found in abundance was about 100 miles wide by 2,000 miles long and ran through Venezuela, New Grenada, Ecuador, Peru, and Bolivia. All of the species, of which there are many, do not grow indiscriminately, but seem to be confined to limits by altitude and climatic conditions. The variety grown in India and Java and which give the best results are the *Cinchona officinalis* and the *succirubra* and the *ledgeriana*, and a few others, but these yield a high percentage of quinine and grow well at an altitude of 3,000 feet above the sea level.

I am satisfied from careful study of the subject that the hardier and best quinine-yielding trees can be grown easily on the islands of Porto Rico, Hawaii, and Isle of Pines, and I can think of no reason why they should not do well in some of the Gulf States, especially Alabama.

In this view, would it not be worth the experiment for the United States Government to follow the example set by the British-India government and institute a series of experiments in the localities indicated? Seeds and plants of the hardiest and best varieties of the cinchonas can be obtained from the plantations in the Madras Province, in Ceylon and Java, and all necessary directions for planting and cultivating will be furnished readily.

BENGAL SOAP PURCHASES.

The importation of soap into Bengal from United States is shown by the following table during the years from 1900-1901 to 1904-5, and the value thereof:

Year.	Hundred-weight.	Value.	Year.	Hundred-weight.	Value.
1900-1901.....	312	\$8,015.00	1903-4.....	813	\$10,513.50
1901-2.....	320	8,568.50	1904-5.....	663	13,675.00
1902-3.....	397	9,905.00			

COOPERATIVE CREDIT SOCIETIES.

The cooperative credit societies act is already thriving in Bengal, India.

Mr. Gourlay, the registrar of cooperative credit societies, has shown that the new institutions have obtained a strong foothold in the peculiar agricultural conditions obtaining there, 86 experimental village societies being now in existence in Bengal, the majority of which have every prospect of ultimate success. The capital has been raised partly from government and wards' estates, and not cheaply at that. The societies pay from 6 to 12½ per cent for their capital and lend at from 12 to 18 per cent. The whole of the profits go to a village fund, from which the original capital borrowed will be repaid; this done, it is figured that the society will have sufficient capital of its own for ordinary seasons.

SIAM.**WORLD RIVALRY FOR COMMERCE OF THE KINGDOM.**

Mr. Hamilton King, American minister to Siam, has compiled the statistics of the shipping trade at Bangkok, which show the following:

The number of British steamers entering the port in 1899 was 298, whereas in 1905 the British flag floated over only 103 making this port, German ships increasing in the same period from 74 to 361 vessels; French remained stationary at 26 vessels; Norwegian rose from 12 to 165 vessels, and those of all other nationalities from 442 to 739 vessels. Japan is also coming in as a competitor, the Nippon Yusen Kaisha Line having placed four ships on the route between Bangkok, Hongkong, and Swatow, making Bangkok once a week. At present the steamers are chartered, but these will soon be displaced by Japanese ships, and it is the plan to increase the service in the near future. That the plan looks toward a permanent service is shown by the fact that the contracts of the Nippon Yusen Kaisha, in Bangkok, have been made for three years.

It is also reported on good authority that the French propose to enter this field in the immediate future. The China-French service will touch at Tientsin, Shanghai, the French ports in China and Indo-China, and at Bangkok. It is possible that this service will be extended to Japan later. This line will also place one boat a week in service and will begin with chartered boats, which are to be changed to steamers owned by themselves as soon as they can be secured.

SYRIA.**TRADE OF ALEXANDRETTA.****A MARKET THAT MIGHT BE SECURED FOR AMERICAN GOODS.**

Consul Jesse B. Jackson, of Alexandretta, reports the trade of Syria as much larger than it is popularly thought to be. He says many American goods, now practically unknown because not advertised or brought to the attention of the Syrians, would sell if properly introduced. He writes:

For many years money in Syria has been scarce and wages low, common labor ranging from 25 to 40 cents and skilled labor from 40 to 80 cents per day. As the district is mostly agricultural and pastoral, the people have had to depend chiefly upon the results of the harvests and the raising of cattle, sheep, and goats. The heavy rains damaged the crops of grain, but was a boon to stock raisers. Owing to the lack of other means of transportation thousands of men are engaged in the carrying trade, conveying goods to and from the interior, accompanying caravans of camels, horses, and donkeys. Another important item that contributes to the welfare of many thousands of the working classes here is the 9,000 or 10,000 looms for the weaving of silk and cotton goods, which have again become active. The raising of silk cocoons promises to become one of the leading

industries, large quantities being woven locally, the exports in 1905 being valued at \$527,750. Of late years a very thriving industry—hand lace making and embroidering—has been growing up at Aintab. More than 2,000 women are kept busy filling orders, shipments being to the United States exclusively, or nearly so. Several thousand people are dependent upon the demand for licorice root, which grows in various localities of this district. In 1904 21,538 tons of it, valued at \$786,106, were shipped to the United States, but in 1905 the amount exported dropped to 11,528 tons, valued at \$432,300.

IMPORTANCE OF ALEXANDRETTA.

With the exception of a limited amount of merchandise transported via Beirut, Alexandretta is the entrepôt for the entire vilayet of Aleppo and a vast region beyond. Considering the facilities and the visible resources of the country, the volume of trade—\$19,096,613 in 1905—is astonishing. Of these \$12,123,948 were imports, and \$6,966,665 were exports. Of the imports the small amount of \$65,635 was from the United States. However, it is gratifying to note that although the amount of cotton goods, paper, copper, lead, zinc, tin plate, manufactures of iron and steel, petroleum, drugs, and hardware sold by American firms was small, it was an increase over the amount sold in 1904. The greater part of the increase was in petroleum. “Provisions” is the only item imported from the United States showing a decrease.

On the whole, it is a fact well worth noting that if there were the least attention paid to this market by the American exporter the United States would soon secure a considerable amount of its trade. What they get now is secured by the commission agents at Alexandretta, Aleppo, and Mersina, through whom, by correspondence, the greater part of the business is done. It seems to be a very difficult matter for the local merchants to buy anything from America, owing to the lack of information obtainable and the indifference of American firms to the local demands.

As the question of price here is more important than that of quality, cheapness must always be kept in mind. The following articles should sell in this district: Agricultural implements and machinery, bedsteads, boots and shoes, carriages, clocks and watches, cotton gins, cutlery, drugs, dry goods, engines, flour, furniture, hardware and other articles of iron and steel, jewelry, lamps, leather, paint, rope, etc. Such things as modern agricultural implements are absolutely unknown throughout the vilayet of Aleppo, and the country is only waiting for the appearance of an energetic dealer to open up a large market for them. In the adjoining vilayet of Adana the people are buying large quantities of mowers, drills, rollers, etc., and there is no reason why the same should not be done in Aleppo.

IMPORTS AND EXPORTS.

Of the imports into Alexandretta (\$12,123,948) Germany furnished \$413,827; United States, \$65,635; England and dependencies, \$6,376,721; Austria, \$1,093,338; Belgium, \$284,347; Egypt, \$304,795; France, \$714,757; Greece, \$14,454; Italy, \$776,788; Russia, \$175,981; and Turkey, \$1,903,305. The principal articles were: Cotton tissues,

\$6,950,011; hardware, \$684,079; silk goods, \$658,827; leather and skins, \$473,729; drugs, \$240,844; tobacco, etc., \$206,340; provisions, \$184,835; manufactures of iron and steel, \$185,102; woolen goods, \$379,490; and paper and stationery, \$127,643. Of the exports (\$6,966,665) Germany took \$224,990; United States, \$788,530; England, \$509,605; Austria, \$80,590; Belgium, \$10,845; Egypt, \$2,032,725; France, \$1,055,690; Greece, \$17,865; Italy, \$237,505; Russia, \$35,395; and Turkey, \$1,972,925. The exports consisted chiefly of the following articles: Cattle, \$1,106,590; native tissues, \$1,233,025; wool, \$726,825; morocco and skins, \$460,125; licorice root, \$432,300; cocoons, \$527,750; sheep butter, \$245,000; breadstuffs, \$392,835; and egg yolks and albumin, \$116,000.

IMPORTS AND EXPORTS OF MERSINA.

Mersina's total imports amounted to \$4,246,487, the principal articles being cotton and woolen goods, \$1,234,890; provisions and groceries, \$405,778; tobacco, etc., \$350,532; iron, steel, and copper, \$550,381; leather and skins, \$213,990; and petroleum, \$182,603. The exports were valued at \$4,744,088, and consisted of the following principal articles: Cotton and cotton goods, \$1,248,245; sesame seed, \$711,957; wheat, \$544,626; sheep and goats, \$192,420; oats, \$163,851; woolen and woolen goods, \$177,067; cattle, \$110,250; flour, \$134,645; and gum, \$112,008.

INDUSTRIAL DEVELOPMENT IN MESOPOTAMIA.

The German consul at Bagdad recently reported to his Government, advises Consul-General Guenther, that the carpet factory established by the "Jewish Universal Alliance" at Bagdad had successfully produced carpets which not only supply the demand in that section but bid fair to become articles for export. A new industry had also been established, principally at Mossul, by manufacturing in large quantities the paper husks for cigarettes, which formerly were supplied by Austrian manufacturers. The latter, in order to retain their foothold, have been compelled to reduce their prices considerably. At Bagdad a large mill makes cloth for uniforms. Printed cloths are also manufactured there for women's apparel.

AUSTRALASIA.

GEOGRAPHICAL DIVISION OF TRADE.

SATISFACTORY SHOWING OF CONTINENT IN RECENT YEARS.

Consul-General John P. Bray, of Melbourne, writes that the imports of Australia for the year 1905 were \$186,614,366, of which Great Britain and possessions furnished \$124,216,449. The imports from Great Britain alone were valued at \$98,886,379; those from New Zealand, \$11,081,760; India, \$6,580,019; Ceylon, \$3,241,970; Canada,

\$1,845,012, and Straits Settlements, \$506,422. All other British possessions fell below \$500,000. The consul-general says:

During the past three years the variation of the value of Australian imports has not been great. In 1903 it was \$188,993,846; in 1904, \$180,161,928 and in 1905, \$186,614,366. The following table shows the value of the imports in 1905 from each of the principal countries:

Great Britain and possessions	\$124,216,449	Italy	\$851,886
United States	24,358,715	South Sea Islands	432,801
Germany	14,730,166	Spain	402,104
France	6,539,373	Austria	396,877
Japan	1,933,563	Philippine Islands	389,938
Switzerland	1,894,499	Greece	360,324
Norway	1,645,558	Cuba	257,005
China	1,550,958	Asia Minor	252,775
Java	1,404,491	Borneo	172,001
Belgium	1,227,959	Russia	167,188
Netherlands	1,188,667	Sumatra	160,180
Sweden	907,865	Turkey	126,997
		New Hebrides	121,789

AUSTRALIAN EXPORTS.

The total exports of Australia during 1905 amounted in value to \$276,616,897, exceeding the imports by \$90,002,531, and of this total \$263,412,734 represents purely Australian products, the difference being accounted for by transshipments. Compared with 1904 the exports are practically equal. These two later years, however, show an increase of nearly \$24,000,000 over 1903. During 1905 goods to the value of \$129,947,181 were exported to Great Britain, \$60,925,266 to other British possessions, \$15,635,427 to Belgium, \$1,289,681 to Chile, \$2,208,335 to China, \$204,018 to Egypt, \$28,045,172 to France, \$18,921,779 to Germany, \$793,604 to Guam, \$262,270 to Hawaiian Territory, \$947,688 to Italy, \$3,028,190 to Japan, \$828,463 to Java, \$1,690,802 to the Netherlands, \$660,661 to New Caledonia, \$1,165,862 to Peru, \$1,952,975 to Philippine Islands, \$698,975 to Portuguese East Africa, \$492,592 to South Sea Islands, \$675,505 to Spain, and \$5,108,720 to the United States.

The principal articles of Australian produce and their values exported during 1905 are as follows:

Agricultural implements	\$177,910	Meat—Continued.	
Bark, tanning	948,495	Frozen mutton	\$5,559,845
Biscuits	183,265	Pork	237,980
Bones (hoofs and horns)	147,055	Rabbits and hares	1,948,690
Butter	11,657,975	Preserved, etc.	1,563,225
Coal	4,308,460	Oils:	
Furs, undressed	161,335	Cocoanut	562,005
Gold:		Eucalyptus	187,600
Bullion	26,349,215	Ores:	
Specie	21,278,515	Wolfram	615,210
Hair, animal	132,865	Bismuth, cobalt, etc.	289,660
Hay and chaff	107,070	Copper, matte, bullion, etc. ..	10,515,505
India-rubber manufactures ..	130,550	Drugs and chemicals	283,785
Jams and jellies	175,555	Fodder	313,020
Lead, pig, matte, etc.	4,143,870	Fruits:	
Leather	2,640,015	Apples	736,060
Lumber (hardwoods)	5,057,695	Other	445,130
Manures	334,585	Pearlshell	1,264,475
Meat:		Potatoes	144,790
Bacon and hams	74,715	Precious stones	772,880
Frozen beef	2,409,625	Sandalwood	194,080
		Sausage skins	152,890

Silver:		Soap.....	\$191,820
Bullion, matte, etc.....	\$4,085,700	Spelter, etc.....	3,900,015
Ore.....	1,182,305	Tallow.....	3,923,590
Silver-load bullion.....	3,853,113	Tin:	
Skins:		Ingots.....	3,826,105
Hides.....	899,230	Ore.....	1,012,105
Rabbit.....	1,487,345	Wheat and flour, oats, etc....	27,292,830
Sheep.....	6,681,615	Wine.....	522,645
Other.....	1,493,885	Wool.....	99,111,080

IMPORTS FROM THE UNITED STATES.

The chief articles of import from the United States were agricultural implements and machinery, \$1,141,215; cotton and linen piece-goods, \$312,600; miscellaneous textiles, \$449,470, exclusive of \$3,837 woolens, \$78,140 sewing silks, and minor articles \$20,360. Arms and ammunition were imported, valued at \$432,540; bicycles and parts, \$90,595; boots, shoes, etc., \$278,625; clocks and watches, \$156,575; medicines, \$254,130; preserved fish, \$549,280; furniture, \$289,210; glue, \$135,855; glucose, \$104,100; India-rubber articles, \$121,550; iron-bar rods, etc., \$232,895; galvanized iron, \$150,555; lamps and lampwares, \$105,325; leather and articles of leather, \$333,200; lumber, dressed, \$127,355; undressed, \$1,687,315; machinery, \$2,318,680; machine tools, \$183,370; nails, \$78,890; pipes and tubes, \$797,425; barbed wire, \$243,970; wire netting, \$32,375; other wire, \$704,836; motors, \$65,550; musical instruments, \$157,035; kerosene oil, \$1,930,030; lubricating oil, \$356,385; other oils, \$122,360; oilmen's stores, \$170,000; paints and colors, \$210,405; printed matter, \$1,015,880; railway material, \$264,915; resin, \$206,955; sausage skins, \$83,295; plated ware, \$86,905; scientific instruments, \$212,695; soap, \$113,305; spirits, \$136,895; stationery, \$87,495; slates, \$77,630; manufactured tobacco, \$488,000; raw tobacco, \$809,380; cigarettes, \$202,980; tools of trades, \$617,860; turpentine, \$198,360; vehicles, \$343,865; wax and paraffin, \$125,780; wood and wicker manufactures, \$395,260.

The total imports from the United States amounted in value to \$24,358,715 against \$22,346,700 in 1903, an apparent increase of \$2,000,000, which is explained by the fact that for the first time a record has been kept of the country of origin of imports into Australia irrespective of the country from which they were shipped. America is by this method rightly credited with imports which previously were deemed English, German, Canadian, etc., because they were shipped through ports of these countries. A comparison by the old method shows that while no actual increase has taken place in our exports to Australia over those of 1904 our trade has been well maintained. Though in some articles, such as tobacco, lumber, oil, agricultural implements, etc., a further increase in our trade with this country will be more or less dependent upon the growth of population and general prosperity of Australia, there is still room for larger amounts of our goods than we have hitherto furnished. England, for instance, supplies Australia with cotton piece goods to the value of \$14,000,000 per annum, and there seems no reason why our manufacturers should not make a better showing against this than the three or four hundred thousand dollars worth at present sent. This is also true of many other lines which could be advantageously pushed here.

The principal Australian exports to the United States during 1905 were as follows:

Coal.....	\$214,605	Skins:	
Copper	24,485	Hides	\$68,920
Leather.....	39,745	Rabbit	82,740
Manures.....	17,070	Sheep	424,975
Onions	20,450	Other	631,875
Lumber	26,770	Wool, greasy.....	3,236,480
Tin, ingots.....	247,450		

SITUATION IN 1906.

The general figures obtainable for the half year ended June 30 would indicate that the year 1906 will show large increases in both the imports and exports of Australia. This view is fully supported by the following comparison of the trade for the first six months of 1906 with the same period of 1905:

	1905.	1906.
Imports:		
Gold and specie.....	\$2,947,882	\$5,389,746
Merchandise.....	79,895,254	94,645,682
Total imports	82,343,136	100,035,428
Exports:		
Gold and specie.....	23,449,104	43,961,328
Merchandise.....	85,750,849	108,300,434
Total exports	109,199,953	152,261,762

The Australian outlook was never more encouraging than it is at present. On all sides a steady growth in prosperity is discernible, and it would appear that a period of good times is in store for this country. A financial crisis, depressed prices for staple products, drought, and other troubles followed in quick succession from 1892 to 1903. From 1903 to 1905 the improvement was gradual, though unmistakable, and this year is most marked and promises to continue so. The producing industries are in a very flourishing condition. Another pastoral year is assured with an increased wool clip and the probability of high prices. Dairying and kindred industries show steady progression. Mining of all kinds is more than fulfilling expectations. Grain growing continues healthy and profitable, and generally speaking production is expanding rapidly in all directions, and as a result the wealth of Australia is quickly increasing and its trade is responding to the improved conditions.

PREPARED PLASTER.

AMERICAN MAKE OUSTED BY THE GERMAN MANUFACTURERS.

Special Agent Harry R. Burrill writes from Perth that in former years there were but two brands of plaster in Western Australia, the "Knickerbocker" and "King's Windsor," and they were both imported from the United States. Recently, however, Germany has entered the field and is now selling what is regarded there as an

excellent quality of plaster at 2s. 4d. per barrel lower than the latest American quotation. Mr. Burrill continues:

Dealers were somewhat skeptical at first, doubting the ability of the German manufacturers to lay down at Fremantle a plaster that would compare favorably with the well known and popular American brands at 8s. (\$2) a barrel, but tests were made and the result was the immediate purchase by one firm of 500 barrels, and the permanent establishment of the German product on the market.

In 1904 the price of American plaster was 7s. 9d. a barrel, landed at Fremantle, including cost, insurance, freight, and exchange, with a sixty days' draft, which carries 2½ per cent exchange, and it was at that time that practically a monopoly was established. Whatever the causes may have been the price has gradually risen to the present figures, and, while they are not regarded as unreasonable by the merchants here, they are still sufficiently high to permit of Germany entering the market at a considerably lower quotation.

INCREASING DEMAND.

According to the importers of American plaster in Perth and Fremantle, the larger price demanded by the American manufacturer is undoubtedly due, in a measure at least, to the higher freight rates, but they are quite as positive in the declaration that, unless the American plaster can be laid down here at as low or lower figures than the German product commands, its elimination, wholly or in part, from the market can not be avoided.

Plaster is extensively used in Western Australia for walls and ceilings and the confidently predicted increase in the population of the state will for obvious reasons carry with it an increased demand for this commodity. Buildings are erected here as they are required and not to any great extent for speculative purposes, therefore the outlook for a steadily expanding plaster market, assuming that the expected immigration to western Australia materializes, is encouraging. The arrival of settlers will, it is held here, stimulate the building industry in all directions and in every new structure plaster will be required. This is entirely aside from a steady regular demand, which in itself constitutes a good business. The customs duty is 9d. per hundred-weight and the wharfage rates are 3s. 6d. per ton. Cartage and handling expenses generally cost about 1s. 6d. per ton.

NECESSARY FUTURE METHODS TO ATTAIN SUCCESS.

While plaster is a comparatively unimportant commodity in western Australian importations, it serves as an excellent object lesson for American manufacturers for it illustrates the ease with which they can be retired from a market of which they had a monopoly. It must not be assumed, as has evidently been the case in several instances that could be cited, that when an American product has been firmly established on the market and has justly attained popularity with importers and consumers because of its quality and price, that it is a fixture and that a commercial war can not be declared and successfully waged to its final undoing. It may be set down as an incontrovertible fact that an American commodity will monopolize the markets of Western Australia just so long as its price is as low as or lower than

its English or German competitors, and no longer; and American manufacturers must be prepared to meet this condition if they desire to maintain their trade in this state.

Germany, through its carefully selected, well-trained corps of commercial agents, is keeping in close touch with foreign commerce and is prepared at all times to take advantage of trade opportunities wherever its wide-awake representatives may find and report them. This information is, of course, available to the German manufacturers and exporters, who are then able to determine definitely and without delay whether they can profitably enter the field. The value of the work of German commercial agents, permanently located in various large importing countries, can not be overestimated, as the results here and elsewhere undeniably show, and they point conclusively to the desirability of exporting countries maintaining trusted representatives at foreign trade centers.

NEW ZEALAND TRADE.

EXCELLENT OPPORTUNITIES OFFERED TO AMERICAN MANUFACTURERS.

Consul William A. Prickitt, of Auckland, furnishes a report epitomizing New Zealand's trade for 1904. It contains a great deal of valuable information, some significant suggestions, and quite a good deal of matter that must lead to larger trade on the part of American manufacturers, if the suggestions are followed. Consul Prickitt writes:

The total trade of New Zealand with the United States has increased from \$3,554,360 in 1895 to \$10,634,180 in 1904. At present we sell the colony more than twice as much as we buy. New Zealand has the largest trade with the mother country; the British possessions come in second, the United States third, and Germany fourth. The following shows the value of the imports into New Zealand from the countries named for the year 1904:

United Kingdom	\$39,911,700
British possessions	15,236,770
United States	7,639,575
Germany	1,544,020
All other countries	2,126,405
Total	64,111,010

Of the last amount over two-fifths, \$863,795, were imported from Ceylon in tea and coffee.

PREFERENTIAL TARIFF A HANDICAP.

In competition with the United Kingdom and the British possessions all other countries are handicapped by the Preferential Tariff Act passed in 1903, which allows the favored countries to enter certain goods at the prescribed tariff, but imposes 50 per cent additional on other countries. Upon free goods to the favored countries the non-favored are obliged to pay 20 per cent ad valorem. Then the United Kingdom and the near-by British colonies in Australasia have other very important advantages to facilitate their trade. There is the natural feeling of blood relationship, the fact that they are buying nearly

95 per cent of all the products that New Zealand has to sell, and above all, perhaps, because commercial intercourse is made easy by the regular lines of steamships plying between the countries.

VALUE OF OCEAN TRANSPORTATION.

The Oceanic Steamship Company, making service every three weeks between San Francisco and Sydney, with stops at Honolulu, Pago-Pago (Samoa), and Auckland, is the only steam communication with Australasia under the American flag. This line carries the mails and makes it possible to make the journey from London to Auckland in twenty-eight days and from New York in twenty-one days. Although the mail facilities given by this line for the last five years have become almost indispensable, there is talk of its discontinuance, because its proprietors are running it at a loss. It has been interrupted recently and greatly embarrassed by the great disaster to San Francisco, where the owners lost heavily. A rival line has just been established making monthly trips from Sydney to Vancouver, via Auckland, Suva (Fiji Islands), and Honolulu. This line is intended to encourage and facilitate trade between Canada and Australasia and to make the Canadian route from England to its colonies in the South Pacific easy, comfortable, and even luxurious.

Considering the growing importance of trade and travel with Australia and New Zealand, and the great importance of developing our western coast, it would seem to be a serious mistake if the United States should allow business which naturally belongs to it to drift away for lack of support and means of transportation.

GERMANY A COMPETITOR.

Besides the United Kingdom and the colonies, Germany is really the only competitor of the United States for business in New Zealand. The trade of the United States is now five times as great as that of Germany, yet the German trade is increasing rapidly. Germany leads the United States in several lines, but the principal one is musical instruments. During the year 1904 it sold in the colony \$250,000 worth of pianos (principally), while our sales amounted to less than \$32,000. There is really no reason for this important difference, except that the German trade is pushed and easy payments are accepted. It is true that this trade is mostly in pianos of a cheap grade, but the manufacturers in the United States should be able to sell pianos as good on equally favorable terms.

BUSINESS ACTIVITY—GENERAL PROSPERITY.

Business in New Zealand is excellent. The people are actively engaged in agriculture and mining. Everything they have to sell is bringing a good price. Wool, the greatest export, is selling for over 13 pence a pound (about \$0.27), almost double the price of six years ago. The advent of the freezing chamber has made possible the turning of the surplus meat into money, and this export now ranks second. Gold comes third, and the output is increasing every year. Butter and cheese producing is increasing rapidly, and will probably take second place in the near future. The cultivation of flax is becoming

very important, and the increase in the exportation since 1895 is very remarkable—1895, value exported, \$105,200; 1904, value exported, \$3,551,405. New Zealand has an almost unique source of wealth in kauri gum. This is a resinous deposit found in the ground emanating from the kauri pine tree. It is used in the manufacture of varnish. The amount exported at present is about \$2,500,000 per annum, of which the United States takes over one-half.

With good business and a purchasing power rapidly increasing New Zealand is a free buyer. The United States should increase its trade in spite of the preferential duties. The colony does not manufacture largely. Iron and steel goods are not produced at all, although there is raw material in abundance. There will be an increased demand in the near future for certain kinds of these goods.

WORKS PROJECTED—FOREIGN MATERIALS NEEDED.

The country is new and needs development. There are as yet only 2,374 miles of railroad in an area of 104,000 square miles, and most of the things necessary for railroad construction and operation will be wanted. The wooden wharves at the main ports, which are quickly destroyed below the water level by insects, will be replaced by concrete reinforced by steel. The Auckland harbor board is authorized to spend \$10,000,000 for this purpose at the port of Auckland, and the Ferro-Concrete Company, an Australian corporation, is now actively engaged in the work. Other ports have this matter under consideration.

The earthquake and fire at San Francisco have demonstrated the value of steel frames for buildings, and these are sure to be in demand in the future structure of all important buildings in this region where earthquakes may occur at any time. The United States, on account of its great steel manufacturing plants and its geographical position, should have a large share of this trade.

New business should be sought by sending here capable representatives familiar with the goods. Their efforts should be backed up by advertising. The colony has excellent newspapers which have a large circulation and are widely read. They contain at present many advertisements of American goods, which indicates that they are being used with good results. After the trade is obtained it should be carefully looked after.

TASMANIAN TRADE.

COUNTRY PROSPEROUS BUT NOT PARTICULARLY PROGRESSIVE.

Consul A. G. Webster, of Hobart, reports the over-sea imports to his district in 1905 at \$3,592,046; over-sea exports, \$2,297,840. For the six months ended June 30, 1906, these were \$1,723,409 and \$1,905,864. The interstate trade was \$9,312,708 imports and \$15,720,941 exports. The figures for over-sea trade are far from satisfactory, according to Consul Webster, since a large part of the interstate trade consists of transshipments to Europe and elsewhere. The consul writes:

The past year was not remarkable for any new industries nor for any great expansion in those already in existence, but yet a general degree of prosperity prevailed, due to the enhanced values of copper,

lead, and tin, and also to that of wool, with its consequential effect on the price of sheep. Naturally more activity was displayed in mining operations, and this continues. The timber export trade again increased in volume, but, owing to the low prices, is more a source of profit to those employed in its production than to the mill owners. Coal has not, so far, formed more than an insignificant part of the exports, from the fact that none of the various seams worked are good enough for steamer or gas purposes. A new development, however, is now all but ready for operation, which is claimed to be steamer coal. The year's yield of gold was \$1,520,197; copper blister, \$3,427,412; silver lead ore, \$1,201,480; tin and tin ore, \$1,764,933.

UNFAVORABLE TRADE FEATURES.

While, as already stated, the State has enjoyed prosperity, which continues, there are unfavorable features to be noticed. A marked falling off in the cultivation of cereals has taken place, due partly to the fact that wheat, especially, can be grown more cheaply in the other States of the Federation, and partly to the exceptional values ruling for wool and stock. The result is a diminished demand for labor, and hence, in spite of the expansion in mining, the population shows little increase.

Fruit growing is one of the most important industries, and has been, perhaps, the most consistently thriving until the past season. For the first time in its history the apple crop suffered a very extensive, and in many cases a disastrous, failure. The great advance in prices ruling for the crop will afford but partial compensation to orchardists. It is considered probable that the coming season will witness the largest crop ever gathered. Altho not relating to the period under review, I might mention that a scheme is maturing to construct an aerial railway to connect the city of Hobart with the summit of Mount Wellington, a distance, roughly, of 5 miles, the height to be attained being 4,166 feet.

JAVA.

PUBLIC SALE OF QUININE.

Consul B. S. Rairden, of Batavia, reports that the sixth public sale of quinine in Java for the year 1906 was held in that city on August 29, with the following results:

There was put up for sale 2,721.60 kilograms (about 5,988 pounds) of government quinine, and 602.88 kilograms (about 1,326 pounds) private quinine. Of the former lot none has been sold. Only 90.72 kilograms (about 200 pounds) of the private quinine has found purchasers, at 11.9 florins (\$4.79) per kilogram (2.2 pounds). The quinine sold has been option quinine, i. e., packing at purchaser's option.

AFRICA.

GERMAN COLONIES.

TRADE WITH THE FATHERLAND.

A report from Consul Southard P. Warner at Leipzig states that Germany's trade with its colonies during the past two years shows interesting results. The value of the imports from the colonies to Germany increased from \$1,789,760 in 1903 to \$2,651,320 in 1904, and to \$4,288,760 in 1905. The value of the exports from Germany to the colonies increased from \$5,854,800 in 1903 to \$8,330,000 in 1904, and to \$11,067,000 in 1905.

The following table shows the value of Germany's trade, both import and export, with the individual colonies during the past three years:

	Imports.			Exports.		
	1903.	1904.	1905.	1903.	1904.	1905.
East Africa	\$547,400	\$809,200	\$1,404,200	\$618,800	\$1,213,800	\$1,951,600
Southwest Africa	71,400	23,800	71,400	1,071,000	3,522,400	4,902,800
Kamerun and Togoland	1,047,200	1,570,800	2,594,200	1,356,600	1,523,200	1,951,600
Kiau-Chau	4,760	9,520	4,760	2,475,200	1,832,600	1,904,000
New Guinea	23,800	23,800	23,800	214,200	190,400	238,000
Samoa	95,200	214,200	190,400	119,000	47,600	119,000
Total	1,789,760	2,651,320	4,288,760	5,854,800	8,330,000	11,067,000

As far as the importations into Germany are concerned, Kamerun, Togoland, and east Africa are the most important of the colonies. During 1905 the imports of caoutchouc from all three of these colonies showed increases. Other articles showing increases were palm kernels, cocoa, ivory, and ebony wood from Kamerun, Indian corn from Togoland, and cotton, sisal, coffee, and wax from east Africa.

The very noticeable increase in the value of the exports to southwest Africa was chiefly due to the large shipments of military supplies. During 1905 the principal articles of export from Germany to southwest Africa were military supplies, oats, beer, spirits, chocolate, butter, preserves, ham and sausage, cigars and tobacco, sugar, and wine. Coined silver to the value of \$499,800 was exported from Germany to east Africa in 1905, and \$17,375 to Kamerun.

FOREIGN COMMERCE OF THE KAMERUN PROTECTORATE.

Consul-General Richard Guenther reports from Frankfort that the total foreign commerce of the German protectorate of Kamerun amounted to \$5,315,261 in 1905, against \$3,992,938 in 1904, being an increase of 33 per cent.

The imports in 1905 amounted to \$3,162,219, the exports to \$2,153,042. In the imports the share of Germany was 74.99 per cent; that of Eng-

land, 22.94 per cent. In the exports Germany's share was 82.23 per cent; England's, 17.55 per cent. The increase in exports extends to all kinds of goods. That the purchasing power of the natives has increased is shown by the imports of tobacco, all sorts of textiles, underwear, clothing, etc. The large increase in imports of machinery for industrial purposes is accounted for by the drilling for petroleum. In the exports the value but not the quantity of palm oil shows a decrease against 1904, while for all the other important products of the country, as coffee, ivory, cacao, timber and woods, colan nuts, and palm seeds, an increase is noted.

TRANSVAAL.

PATENT MEDICINE TRADE.

IMPORTANT CHANGES MADE IN THE OFFICIAL REGULATIONS.

Consul J. H. Snodgrass reports some changes in the laws of the Transvaal in regard to patent medicines. He writes:

There have been some changes in the old medical and pharmacy laws of this colony, and the present ordinances do not require that the formulas shall be printed on the labels and wrappers of proprietary medicines. It is, however, required that all proprietary and other medicines containing, as ingredients and substance, poison, shall be labeled "poison," and shall bear the name and address of the seller. A list of these poisons was printed in Daily Consular Report, dated March 26, 1906.

Further, under the amending ordinance of 1905, it is provided that unqualified storekeepers, on obtaining a license, may sell certain medicines mentioned in a list by the colonial secretary [the list is on file at the Bureau of Manufactures], provided certain precautions are observed, which are that where any such medicines contain poison they shall be labeled and also bear a label stating the dose to be administered.

It is further provided in that amended ordinance that the resident magistrate of any district may issue a certificate to an importer or general dealer, authorizing him to keep for sale and sell poisons for any mining, agricultural, or industrial purpose, and further, may issue a certificate to any person resident in the district authorizing him to keep for sale and to sell poisons prepared for the destruction of wild animals or vermin, or for the treatment of scab or other diseases in animals, or for treating insect pest or plant disease. Government notice No. 14 of 1906, relating to patent and Dutch medicines, states that those medicines named shall be a preparation for the purchase and sale of which, by any person holding a general dealer's license, the magistrate of any district may issue a certificate.

The attention of general dealers and exporters is invited to the second proviso of section 7 of ordinance No. 18 of 1905, which prescribes that all boxes, wrappers, bottles, or packages in which the preparations named in the schedule are sold shall bear a printed label showing the doses in which such medicines are to be administered.

THE VICTORIA FALLS SCHEME MAY NOT PROVE A SUCCESS.

The Financial Times, of London, asserts that views obtained from various experts on the Rand, in Africa, concerning the Victoria Falls power scheme, show that it will not be a financial success.

In the immediate vicinity of the Rand coal is both cheap and abundant, and water for condensing purposes can be obtained in practically unlimited quantities within 40 miles of Johannesburg. Where coal is dear and water is scarce there is no question about the success of a cheap water-power installation, and this accounts for the success of such enormous undertakings as the Mexican Light and Power Corporation with an issued capital of \$30,000,000, coal being unobtainable in Mexico City under about \$7.50 per ton, and for the desire to operate by water power electric tramways and lighting plants in all the larger centers of South America where coal is equally dear. On the other hand, with unlimited coal at a low price and with modern electrical appliances, it is said to be very questionable whether the Victoria Falls can transmit power to the Rand in selling competition with that to be derived from such cheap coal. The longest transmission line at present working is said to be less than 200 miles, carrying an effective load of under 40,000 horsepower. The long distance from the falls to the Rand will interfere, the Times says, with the success of the movement.

MOROCCAN OUTLOOK.**GENERAL IMPROVEMENTS BEING INAUGURATED.**

Consul Albert Halstead, of Birmingham, writes that the British consul of Dar-el-Beida, which comprises half of Morocco, has submitted a very interesting report, in which he says:

The year 1905 was one of distress because of drought, in which Morocco imported instead of exported food stuffs as she usually does. It appears that public works will soon be undertaken in the coast towns of Morocco and that "changes are in the air." The Algeiras conference has unlocked the door of Morocco to enterprise, and has made it clear that all public works are to be tendered for in the open market, and a state bank is to be established which will watch over the administration of finances. There is to be no favoritism.

Private individuals are likely to build extensively in the near future, and everything appertaining to the building trades may find a market, but the orders are not likely to go to the United Kingdom unless the trades concerned combine to send out shrewd and tactful experts to take stock of local requirements and conditions and to make acquaintances with the men on the spot who could assist them to obtain business. Catalogs alone will not attract orders.

THE AMERICAS.

SOUTH AMERICA.

COMMERCE OF THE LATIN COUNTRIES.

REVIEW OF CONDITIONS AND PROSPECTS OF THE UNITED STATES.

The commercial relations of the Pan-American Republics is the subject of an able report from Mr. John Barrett, American minister to Colombia, of which the following is a summary:

The commercial economy and social conditions of Latin America invite the immediate and particular attention of the people of the United States. Already a livelier interest is being created, which is shown by the fact that during the last year 812 inquiries have been addressed to the writer from all parts of the United States, asking many questions concerning South America. To impress upon the reader the importance of this field from a commercial point of view, it is well to consider some general figures covering the present extent and value of Latin American trade which is remarkable, and is but preliminary to a large development during the next decade.

A careful estimate based upon the official figures of 1903, 1904, and 1905 shows that the total foreign trade, exports and imports, of the twenty Latin American Republics, from Mexico and Cuba south to Argentina and Chile, amounts now annually to the magnificent total of approximately \$1,800,000,000 gold. The exports and imports stand in about the ratio of 5 to 3; that is, the former will be three-fifths and the latter two-fifths of the total. Importations, therefore, are about \$720,000,000. With no further investigation, these larger sums alone show a remarkable advance over those of ten years ago, and would be a sufficient argument in favor of the United States combining its energies to increase its commerce with South America. Let us note just where our country now stands.

LOW AMERICAN PROPORTION OF TRADE.

The total exports of the United States to Latin America in 1905 were valued at \$182,000,000; the total imports from Latin America to the United States were \$309,000,000. This means that there is an annual balance of \$127,000,000 against the United States, which Latin America in turn uses to buy a vast quantity of articles in the more enterprising markets of Europe. Considering the greatness of the United States and the variety of its manufactures and products, and its conditions of supply and demand, there is no valid reason why it should not sell to Latin America as much as it purchases from it.

If one studies the exports and imports of the United States from all parts of the world, additional proof is found that our country is not

carrying on the trade with Latin America that it should. Only 4 per cent of America's huge total of exports went to Latin America in 1905, although the latter's imports are valued at over \$720,000,000, and only 13 per cent of our immense total of imports found their origin in that part of the world, whose exports are valued at \$1,000,000,000.

The markets of the Orient are of great importance to the United States, and the total value of the foreign commerce of Latin America, having a comparatively small population, is far in excess of that of the Far East, north of Hongkong, having an enormous population. Argentina, with only 6,000,000 people, bought and sold more than China, with 400,000,000, or Japan, with 40,000,000. The foreign commerce of Chile, whose population does not exceed 3,500,000, was greater than that of Eastern Siberia, Korea, Siam, Indo-China, and the Philippines combined, with a population of 50,000,000.

DIFFICULTIES TO BE OVERCOME.

Some of the trade factors unfavorable to North America for the development of commerce with the South should be stated. The average North American, instead of carefully studying methods of counterbalancing the difference in kinship and language which impede his progress, undertakes an independent line of action, and often fails in his purpose. So small is the percentage of North Americans visiting Latin America who speak Spanish and Portuguese that it is a wonder that they make any progress in their plans. Ninety-five per cent of the Europeans who come to Central and South America understand one of these tongues. The business schools and colleges of the United States should make the study of either Spanish or Portuguese compulsory in order to receive a diploma. Portuguese is more important than it is generally regarded, because it is the working language of Brazil, and Brazil is to-day taking rank as one of the great nations of the world. But the average well-to-do Brazilian also speaks French. The patronizing spirit of North Americans is too often shown in dealing with Latin America. They should realize that Latin America's history is replete with progress in developing government and education and making its own literature, as well as progress in advanced scientific investigation and invention, and that it has universities and professional schools no less advanced than similar institutions in the United States and Europe.

BETTER TRANSPORTATION FACILITIES NEEDED.

The lack of first-class passenger and mail steamship service must also be emphasized in marked contrast with the ease of communication between Europe and Latin America. If the average merchant and traveler of South America could reach New York with the same comfort and speed that he could proceed to Paris, there would be at once a radical change favorable to the United States. The difficulty of communication is shown by the fact that many delegates from North America to the recent Pan-American conference at Rio de Janeiro were compelled to go via Europe, where six different lines provide a score of splendid, modern, fast ships between the principal ports and those of South America.

No Latin-American merchant or capitalist is going to North America on a slow semicargo boat with limited accommodations when there are

numerous fast steamers bound for Europe with as fine arrangement as the trans-Atlantic lines. This is axiomatic, but it means the loss of millions of dollars of trade to the United States every year, according to the direct testimony of South Americans themselves. It is true that there are excellent freight steamship facilities between North and South American ports, but they do not meet the passenger requirements.

POINTS TO BEAR IN MIND.

Some of the specific agencies that demand attention and improvement for the developing of commercial and friendly relations with South America may be enumerated:

1. The sending of business representatives or traveling salesmen, who should always be gentlemanly and speak Spanish and French.

2. The manufacture in the United States or adaptation of articles to suit the local Latin-American demand.

3. The giving of credit to reliable purchasers, as is done by European shippers, instead of always exacting payment in advance or on shipping.

4. The use of greater care in packing goods for the long distance of travel and for the severeness of climate, and for the size of parcels required in different markets.

5. The opening of North American banks or branches thereof in the principal cities of South America.

6. The inducing of young Latin Americans to come to our technical and professional schools instead of going to those of Europe.

7. The popularization in our schools and colleges of the study of Latin languages, history, and institutions.

8. The early building of Pan-American railway connections so that North, Central, and South America may be literally united with ties of steel.

9. The investment of North American capital in developing resources, mines, and industries, and in the construction of railways, tramways, and electric-light plants in the more progressive countries of South America.

ARGENTINA.

COUNTRY'S EXPORTATIONS.

LEADING SHIPMENTS FOR FIRST HALF THIS YEAR.

The Review of the River Plata publishes figures showing the exportations from the Argentine Republic during the first half of 1906. The important commodities were as follows:

Wheat shipments amounted to 1,758,558 tons, as compared with 1,853,266 tons in the same period of the previous year. The United Kingdom took 232,772; France, 30,149; Germany, 69,970; Belgium, 272,738; Italy, 40,967; South Africa, 13,369; Brazil, 117,144; altogether, 794,202, and other countries, 187,247. Flour shipments aggregated 56,867 tons, as compared with 59,914 tons for the first half of the previous year, and were distributed as follows: The United Kingdom, 4,616; France, 81; Germany, 919; South Africa, 200; Brazil, 49,625, and other countries, 1,426. Bran shipments amounted to 78,043 tons.

Corn shipments reached a total of 898,170 tons, as compared with 738,492 tons in the 1905 period; 63,309 going to the United Kingdom, 48,317 to France, 50,818 to Germany, 23,803 to Belgium, 35,127 to Italy, 2,057 to South Africa, 6,036 to Brazil, altogether 560,975, and 574,552 to other countries.

Beef was sent abroad in the first half of 1906 to the amount of 1,111,043 quarters, as compared with 805,146 quarters in the 1905 period. The United Kingdom took 952,717 and South Africa 154,758. Tallow was shipped to the amount of 10,363 pipes, 40,947 casks, and 2,362 hogsheads.

Butter was exported to the amount of 91,690 cases as compared with 121,217 cases in 1905, when one-half of the shipments went to the United Kingdom, almost all of the remaining going to South Africa. Of dried oxhides in the half year under review there was a total export numbering 1,144,932 as compared with 917,623 in the half year of 1905. The United States took the largest share, or 712,403; Germany, 144,803; Italy, 158,966. Salt oxhides were shipped to the number of 772,485 as compared with 760,869. Germany took 381,891; Belgium, 195,971; the United Kingdom, 101,437, and the United States, 46,576. There were also shipped in the first half of this year 49,135 dried and 6,175 salt horsehides, of which Germany took almost the whole. Sheepskins exported numbered 24,628 as compared with 29,250. France took two-thirds of the shipments. Goatskins to the number of 6,200 bales were shipped as compared with 6,076. Belgium took 2,756 and the United States 1,999.

Wool was shipped to the amount of 258,538 bales as compared with 305,386 bales in 1905. France took 91,224; Germany, 88,428; Great Britain, 20,365, and the United States, 17,801.

URUGUAY.

MARKET FOR BUILDING MATERIALS.

PUBLIC ENTERPRISES IN REPUBLIC REQUIRE EXTENSIVE SUPPLIES.

Consul John W. O'Hara has already called attention to the demands of this market for building materials and furnishings and to the general activity in building trades in Uruguay, and desires further, particularly, to call attention to some public buildings and improvements recently projected, concerning which he writes from Montevideo:

The Government of this country has recently made arrangements for three new enterprises of importance, for the construction and furnishing of which a large amount of materials will be necessary, namely, the national university, for which \$1,000,000 has been appropriated; the legislative palace, with an appropriation of \$1,516,000, and the grand avenue and viaduct. The cornerstones of the university and the legislative palace were laid on July 18. The projected grand avenue is to extend from the legislative palace to the site of the new Government building, to be constructed later, a distance of about 1 mile. Owing to the declination of the surface, there will be three large steel spans crossing the lowest of the intersecting streets at a considerable height. In order to build this avenue and viaduct it is proposed to appropriate for public use so much of the streets and private property

as is necessary for the avenue itself, as well as the property adjoining it for one block on either side.

In order to give a better idea of the extent of the proposed university and the materials necessary for its construction, furnishing, and equipment I give a short description of it which appeared in a recent issue of the official organ of the Government, "El Dia." [This description will be loaned to those interested in the order of their application to the Bureau of Manufactures.]

The materials necessary for these improvements will have to be imported with the exception of stone, lime, and brick. Those most needed will be structural steel, lumber, glass, and builders' hardware. In the matter of furnishings it is proposed that those of the latest improved models be accepted, and inasmuch as they are for public buildings to be paid for by the Government the local tariffs should not interfere. American furniture is in use here and very popular. The department of public instruction recently purchased some furniture in the United States, which is now in use in the schools of this city, and I am informed is very much pleased with it.

Full particulars as to the buildings to be erected may be had from Señor Juan A. Capurro, ministro de fomento, Montevideo, and as to the grand avenue from Señor Juan P. Lamolle, jefe, inspección de caminos, Montevideo.

BRAZIL.

TRADE STIMULATION.

NEW STEAMSHIP LINE—THE REDUCTION IN DUTIES.

In a dispatch to the State Department from Brazil, Ambassador Griscom summarizes the effect of the visit of the Secretary of State, and in the course of the dispatch says:

"It is fortunate that just at this moment, as telegraphed to you by me on the 20th instant, the Lloyd Brazileiro, the largest Brazilian steamship company, has just put into operation a new monthly steamship service between Rio and New York. The English company of Lamport and Holt have been running a monthly service with a practical monopoly, and without competition the freights have been prohibitive. It is hoped that we are entering upon an era more favorable to merchants who may desire to reach out for trade with Brazil. The crying need of our relations with Brazil is better steamship communications. Inquiry among our leading financiers and merchants indicates that encouragement by our National Government in the form of a small postal or other subvention would quickly bring about the establishment of a good line of American steamers between New York and Rio. Given a few facilities our trade with Brazil must inevitably go ahead at once with leaps and bounds."

Minister Griscom, who was fortunate in securing a reduction of 20 per cent in the duties imposed by Brazil on imports from the United States of flour, condensed milk, rubber type (tariff No. 1023), watches, paste (tariff No. 173), varnishes, typewriters, refrigerators, pianos, scales, and windmills, is said to feel some anxiety over the fact that the matter has not been sufficiently brought to the attention of exporters in the United States, as this reduction, unless extended,

will end on December 31, next. This offers a splendid opportunity for exporters of such products to Brazil, and in connection with the new line of steamships established by Brazil, ought to very largely increase the exports to that country for the remainder of this year.

FALKLAND ISLANDS.

PROPOSED FLOCK IMPROVEMENT.

SHEEP FARMING BRINGS GOOD RETURNS IN THE COLONY.

The windswept, treeless Falkland Islands, off the Argentine coast, owe their present prosperity almost entirely to the prosecution of the sheep-farming industry.

The British colonial secretary of the Falklands proposes the improvement of the flocks, which, he states, would lead to a considerable increase in the output of wool, of which the export last year reached the value of \$690,000, sheepskins and tallow accounting for \$112,000.

It would seem, however, that the colony has an asset of great value in its extensive peat deposits. Efforts are being made to turn them to account. The secretary says there is no reason why the demand for fuel on the neighboring mainland should not be supplied in briquettes from these islands. Experiments with the deposits by the British Imperial Institute point to the fact that they can be satisfactorily converted into patent fuel.

The Falkland Islands contain an area of about 7,500 square miles, the chief town being Stanley. Fortnightly communication is maintained by the steamers of the Pacific Steam Navigation Company, which call at Port Stanley on both the outward and homeward voyages.

The chief imports of the Falklands are provisions, wearing apparel, timber and building materials, machinery and ironmongery, the total amounting to \$323,213 in 1903 and to \$240,892 in 1904. The exports consist of wool, hides, and tallow, the sale of which steadily increases, having been \$564,100 in 1903, \$608,648 in 1904, and \$802,000 in 1905. The Falkland Islanders are a thrifty people, one savings bank having over \$230,000 on deposit belonging to 356 depositors.

CUSTOMS CHARGES ON FOREIGN TRADE.

The following statement of import and export duties was transmitted by John E. Rowen, consul at Port Stanley, Falkland Islands:

The import duties are: On spirits, strong waters, liqueurs, cordials, sweetened spirits, and all articles containing any quantity of alcohol or spirit which, by the imperial customs laws, are liable to duty as spirits, 12s. (\$2.98) per gallon; wine in casks, 2s. per gallon; wine in reputed quarts, 4s. 6d. per dozen; wine in reputed pints, 2s. 3d. per dozen; British wines and all other unenumerated and unexempted beverages not liable to spirit duty, in reputed quarts, 3s. per dozen; malt liquor, mum, spruce, cider, and perry—in casks, 6d. per gallon; in reputed quarts, 1s. per dozen; in reputed pints, 6d. per dozen; cigars, 5s. per pound; cigarettes, cut and manufactured tobacco, and snuff, 3s. per pound; all other unexempted tobacco, 2s. per pound.

NOTE.—Six reputed quart bottles or 12 reputed pint bottles are considered to be 1 gallon.

The export duties are: On wool, one-twentieth of a penny (one-tenth of a cent) per pound; sheepskins, one-half penny each; living sheep, one-half penny each; hides, 3d. each; sealskins, imported for transshipment or exportation, 1s. each.

CHILE.

TREATY WITH JAPAN.

MOVEMENT TOWARD CLOSE COMMERCIAL RELATIONS.

According to the "Revue du Commerce Extérieur," a line of steamers has been put on the Pacific between Chile and Japan. The purpose of those interested is the establishment of close commercial relations between the two countries. The *Glenfarg*, commanded by British officers, manned by Japanese sailors, after a stop at Callao, went on to Arica and Iquique. It made the trip from Japan to Peru in thirty days.

During January last the Japanese minister to Brazil and Argentina, accompanied by his secretary, went to Santiago for the purpose of studying Chilean trade conditions and to see what might be done toward getting the contemplated line started. In March, 1906, another Japanese connected with the Japanese legation to Peru and Mexico went to Chile for the express purpose of studying and reporting on that Republic's commercial and industrial conditions. He went into the statistical records of imports and exports and visited the principal establishments connected with Chile's agriculture, commerce, and education. He took up the problem of extending and improving the commercial relations between Japan and Chile, particularly the present problem of extending the influence of the line of steamers to Chilean ports, particularly to Valparaiso.

JAPAN'S NEEDS.

Japan needs nitrates for the cultivation of wheat, tobacco, and maize. Experiments with nitrates gave satisfactory results. A Japanese agronomer was on the *Glenfarg* on her first voyage with the object of getting more nitrates for experimental purposes. Besides nitrates, Japan, so think her experts, could use Chilean in place of French wines, upon which duties would be less. Japan also wants Chilean fruits, fresh and dried; leathers, condensed milk, and some honey and wax and cabinet woods. In return Japan could supply Chile with maize, tea, cotton goods, porcelain, lacquers, preserved fish, particularly sardines; hams, straw for hats, rice straw for brushes and brooms, to take the place of vegetable horsehair. The Japanese representative asked for samples of different Chilean articles for the commercial museum attached to the Japanese department of agriculture.

The Chilean press is loud in its praise of the new movement. The treaty between Chile and Japan, recently concluded at Washington, containing the most-favored-nation clause, was ratified by the Chilean Congress. There is a serious disposition in Santiago to have this followed up by the establishment of a Chilean legation in Tokyo and a Japanese legation at Santiago.

CENTRAL AMERICA.**GUATEMALA.****SALES INCREASED OVER A MILLION DOLLARS LAST YEAR.**

The foreign commerce for the Republic of Guatemala for the year 1905, according to the Bureau of the American Republics, aggregated \$15,082,202 United States gold, the exports being \$8,237,758 and the imports \$6,844,444, showing a balance of \$1,393,314 in favor of that country.

The importations for 1905 exceeded those of 1904 by \$1,803,302, of which increase the United States secured \$1,265,562, England \$258,978, and Germany \$95,372. Of the imports for 1904 the United States supplied 36 per cent, England 26 per cent, and Germany 25 per cent; while for 1905 the United States furnished 45 per cent, England 23 per cent, and Germany 21 per cent.

The exports show an increase of \$685,892 for the year 1905, during which time the United States took \$582,848 more than in 1904 and Germany \$570,719 more, while England took \$273,822 less. The principal increase was in coffee, the United States taking 82,063 pounds more of coffee in 1905 than in 1904, and Germany 110,540 pounds more.

HONDURAS.**OPPORTUNITY FOR A FRUIT FACTORY ON BAY ISLANDS.**

Consul H. R. Wright, of Utila, reports upon the conditions in the Bay Islands, off the coast of Honduras. He says the exports from the islands to the United States for the six months ended December 31, 1905, were \$106,744, or \$11,000 less than for a like period in 1904. The difference, he thinks, is attributable to the yellow-fever quarantine of 1905. The islanders are fighting hard to exterminate a pest that is destroying the cocoanut trees, the chief source of their incomes. The consul says there is a splendid opportunity for a fruit-preserving factory, as the islands are covered with guavas, mangoes, and limes, which rot on the ground.

A limited number of ice plants, he writes, would find ready sale. The islanders buy United States goods almost exclusively, but they have to go to Belize, in British Honduras, for them, whence they are carried to the islands by local schooners or sailing vessels. He thinks an effort should be made to get the goods into the islands direct from the fruit steamers, or at least in motor-driven boats. The chief exports of the islands are cocoanuts, nearly \$110,000 worth out of a total of \$118,000 in the last six months of 1904, and \$103,000 for a like period in 1905.

WEST INDIES.**TRADE OF TRINIDAD.****MIGHT BE INDUCED TO TAKE MORE AMERICAN GOODS.**

Consul W. W. Handley reports on the commercial conditions of Trinidad during the year 1905. The situation, as he views it, is one

that offers opportunities to American merchants to extend their trade. He writes:

Trinidad's trade depends mainly on the condition of the cocoa and sugar industries and on the shipments of asphalt. The cocoa crop is the most valuable in years, while the production of sugar has gradually decreased since the ratification of the Cuban treaty, which practically shut out the exportation of Trinidad sugar to the United States. As the island is almost exclusively an agricultural colony, with its advantages confined to a limited number of tropical products, it depends entirely on Europe and the United States for manufactured goods which, for climatic and economic reasons, it can not produce.

During 1905 Trinidad imported goods valued at \$10,422,286 and exported produce to the amount of \$10,169,985. The transshipments were valued at \$3,500,731. The principal articles of import were: Breadstuffs, \$1,282,761; balata gum, \$385,104; manufactures of iron and steel, \$787,401; provisions, \$901,725; raw cocoa, \$723,664; timber, \$208,800; live stock, \$245,720; spirits, wines, and malt liquors, \$432,145; fish, \$408,305, and leather and leather goods, including boots and shoes, \$329,659.

IMPORTS FROM THE UNITED STATES.

The imports from the United States during 1905 amounted to \$2,039,323, and consisted of the following principal articles: Flour, \$819,182; lard, \$123,643; meats, \$292,404; textiles, \$142,176; fish, \$47,889; coal, \$51,777; machinery, \$20,054; corn, \$24,320; malt liquors, \$29,054, and carriages and motors, \$10,616. Of the 201,638 barrels of flour imported during 1905, the United States supplied 189,636 barrels, Canada 9,868 barrels, and England 1,425 barrels. England supplied the bulk of textiles, but recently the trade with the United States has largely increased, especially in cotton goods and light sail cloth. During the year textiles to the amount of \$873,000 were imported from England, besides over \$19,000 worth of cordage and twine. The imports of textiles from the United States amounted to \$142,000 and of cordage and twine to \$9,377. The imports of boots and shoes were valued at \$249,988, of which the United States supplied \$108,268 worth, an increase of \$14,000 over 1904.

EXPORTS—COCOA, SUGAR, AND ASPHALT.

The principal articles of export from Trinidad were cocoa, to the value of \$5,742,960; sugar, \$2,169,532; crude asphalt, \$459,802; balata gum, \$392,764; cocoanuts, \$140,294; bitters, \$158,692, and timber, \$69,376. The production of cocoa is the principal industry of the island. It has established an excellent reputation both in Europe and in the United States, and the planters are endeavoring not only to retain this reputation, but to improve it. During each of the last four years the exportation of cocoa from the island has amounted to more than \$5,000,000. The United States is the largest purchaser of cocoa, the amount reaching, in 1905, \$2,184,912, while France bought \$1,948,012 worth, and the sales to England amounted to \$695,836. A stock company, with \$25,000 capital, has recently been formed here for the purpose of manufacturing cocoa and its by-products into different forms.

Of the total sugar output of 324,127 bags, Canada purchased 129,866 bags, the remainder going to England. Asphalt continues to be the

most valuable mineral of the island, the shipments in 1905 amounting to 103,708 tons. The exports of cocoanuts reached 11,037,932, of which 9,000,000 went to the United States. The shipments of copra amounted to 2,006,966 pounds, England taking 75 per cent of the total exported. The exports to the United States during the year amounted to \$3,118,077, the principal articles consisting of cocoa, valued at \$2,731,598; cocoanuts, \$115,267; asphalt, \$249,048; bitters, \$37,440; balata gum, \$8,774, and hides \$5,817.

PROSPERITY IN SANTO DOMINGO.

ISLAND'S COMMERCE AND INDUSTRY RAPIDLY IMPROVING.

Minister Thomas C. Dawson reports his observations on commercial conditions in Santo Domingo, made during the recent journey from the city of Santo Domingo to Sanchez, making stops at all the intermediate ports of the Republic, except Macoris and Barahona. The following excerpts are taken from his report:

Commercial and industrial conditions I found for the most part to be more satisfactory than at any time since my reaching this post, more than two years ago. Throughout Azua Province the people are peaceful and working. In the northern part, where cattle are the mainstay, the herds have been rapidly increasing, and the market prices of hides and beeves are satisfactory to producers. Wood cutting is more active than in a long time. In the southern part the three sugar estates have been running at their full capacity, and the operations of the two new American companies which are engaged in sinking petroleum wells and making hemp are furnishing considerable employment to labor. In the city of Azua retail merchants with whom I talked say they are doing well, owing largely to the increased money in circulation and the cutting off of all important contraband over the Haitian frontier.

RAILWAYS ASSIST COMMERCIAL DEVELOPMENT.

In Sanchez, whose importance is due to its being the terminus of a railway reaching the best cacao region in the Republic, the activity of the exporting houses is the greatest they have ever known. Cacao shipments for April and May broke all previous records. In spite of low prices, the growing of cacao is profitable. New plantations are coming into bearing and others are being planted. The crop has more than doubled in the last five years, and the best-informed people at Sanchez tell me it will again double in the next five.

At Puerto Plata the collector told me that the receipts for June had been \$111,000—the largest ever collected in any one month by that custom-house. Unlike Sanchez, Puerto Plata has a fertile territory in its immediate vicinity. The export of bananas from Sosua is large, and the net result of all the favorable circumstances is that retail as well as exporting trade at Puerto Plata is good.

From reliable and well-informed persons in Puerto Plata I learned that agricultural production in the region tributary to Santiago has been large this year. The railway from Santiago to Puerto Plata can not take care of all the freight offered for shipment in spite of running five trains a day and all the efforts of Mr. Hall, the American manager. The streets of Santiago are reported crowded with mules laden with tobacco, and the cigarette factories doing a good business.

JAMAICA.

ISLAND'S COMMERCE SERIOUSLY DECLINED LAST YEAR.

Some rather remarkable trade fluctuations are exhibited in the annual report of the governor of Jamaica for the fiscal year 1905.

The imports amounted to \$8,137,761 and the exports to \$6,991,700, both being, with the exception of the year 1901, so far as imports are concerned, the lowest for the past decade, during which period the import average has been \$8,477,929 and the export average \$8,670,155 per annum. The decline appears difficult to explain since no pronounced cause is apparent, but as regards imports it is not improbable that the heavy customs duties, which amounted to nearly a quarter of the total value of dutiable goods, restricted inward shipments. The value of imports per head in the last five years declined to \$10.49 from \$14.35 for the previous five-year period, the value of exports per head falling in the same period from \$13.27 to \$10.79.

Of the imports Great Britain supplied 21 per cent and the United States 58 per cent, and much the same proportions prevailed as regards the exports. The most serious decreases occurred in bananas, logwood, cocoanuts, ginger, and oranges, which between them represent a fall of \$800,052; bananas alone during the last three years have dropped from \$5,522,504 to \$2,502,354. The only notable increases have been in pimento and logwood extract, which have come up \$312,429. The value of the total shipments of pimento amounted to \$666,710, the highest of the decade. Tobacco cultivation has made great progress in recent years, and the amount exported in the fiscal year named was \$109,009, which is \$31,632 more than the average of the decade. Other leading products of the island last year, however, compared badly with the decennial average, as witness the following examples: Sugar, \$566,460, against \$799,079; rum, \$450,637, against \$648,703; coffee, \$414,625, against \$912,468.

A curious point about sugar is the reversal of the proportions taken by Canada and the "States" during the last three years. In 1903 the latter took 150 times as much as the Dominion, now Canada takes 34 times as much as the American Republic.

CUBA.

TRADE-MARK PROTECTION.

Manufacturers of the United States who have any thought of exporting their goods to Cuba should register their trade-marks in that country at once as the only method by which they may protect themselves. If owners do not register their marks others will, and the owners will then be compelled to buy out the speculator if they wish to sell their own goods under their proper names. When once registered by speculators, the real owners of trade-marks are at a great disadvantage, and must, either by paying royalties or direct purchase, buy up the speculators. The Habana Chamber of Commerce, recognizing the great injustice that is being done in this way, is urging foreign manufacturers in their own behalf to register their marks before others do so, and thus practically confiscate their property. The dues charged in Cuba for the registration of a trade-mark are \$12.50 United States currency.

TRAFFIC OF THE ISLANDS.

The British Government recently issued documents showing the exports from the West Indies to the United Kingdom and to the United States for a series of quinquenniums covering twenty years, and ending 1900-1904. In that period the average annual shipments to the United Kingdom dropped suddenly from over \$10,000,000 to \$7,000,000 and the percentage of the total shipments from 37.3 to 26.4. The United States percentage on the other hand advanced from 43.2 to 47.5, notwithstanding that the latest quinquennium shows a decline. The decrease in the exports to the United Kingdom is largely due to the sugar trade, shipments of that class having dropped by nearly 50 per cent. Shipments of fruit, cocoa, and tobacco to Great Britain and other countries exhibit a very great expansion, although the coffee exports have diminished. The efforts of the West Indies to make up for the shrinking sugar industry with the United Kingdom have not been crowned with much success, largely due to the market they find for their goods in the United States.

NORTH AMERICA.

REPUBLIC OF MEXICO.

OPPORTUNITY FOR A MODERN REFRIGERATING FACTORY.

Consul-General A. L. M. Gottschalk writes as follows from the City of Mexico:

The new ice manufacturing company reported from this district has met with considerable delay and its establishment seems to be still far distant. The situation as regards the consumption of artificial ice in the City of Mexico and neighboring districts is particularly interesting. On the great central plateau of Mexico the use of ice is not uncommon, and a concern engaged in the manufacture of this product artificially would have an advantage in building up a trade. I am told that the small amount of ice manufactured here is very inferior, that the so-called plate system is not used, and that the water is not distilled beforehand. This last feature is of the utmost importance in a city whose public health has for centuries been menaced by an unhygienic water supply—a condition which the present government is attempting to correct.

The establishment of a modern ice plant which would turn out a product guaranteed to be absolutely hygienic would not only be a desideratum—and as such might command government support—but could as well prove in itself a paying business proposition. I am told that the daily consumption of ice in this city is about 60 tons, which is small for a population of nearly half a million. These figures are naturally considerably increased during the long summer season. There is stated to be 75,000 prospective customers for ice here. The lowest priced ice sells for \$10 Mexican silver (\$5 approximate, United States currency) per ton and this is only to contractors by the year. Most large consumers, I am told, pay from \$15 to \$20 Mexican per ton. To private consumers, ice is sold from 3 to 5 cents Mexican silver per kilo (2.2 pounds).

The city badly needs a sanitary ice supply, and the Mexican Government would probably offer some support. Artesian water is procurable and labor is not expensive. N. H. Adler, whose address is Primera Bucareli, No. 627, furnishes the following budget of expenses (United States currency), which he thinks would carry through an artificial ice company with good modern equipment: Electricity, \$70 per annum; engineers, \$2.50 to \$5 per day; common laborers, 37½ to 50 cents per day; keep of horses, 25 to 37½ cents per day, and taxes about \$17.50 per month. He believes that the expenses of manufacturing, delivery, and all other possible expenses could be brought as low as approximately \$1.50 per ton. It might be well for persons who have some interest in the matter treated of in this report to address Mr. Adler.

AMERICAN BANK NEEDED.

EXCELLENT BUSINESS OPPORTUNITY OFFERED AMERICANS.

Vice-Consul A. W. Brickwood, of Nogales, reports an excellent opportunity for the investment of capital in the consular district of which Nogales is the leading city. He writes:

It would seem that among all the vast mining interests controlled by American enterprise in this district the advantages to be derived from banking transactions conducted by Americans and fortified by American capital could not fail to enlist the attention of astute financiers. At present there are two American institutions of the kind, and they are of a private nature, both located at Cananea. The only bank of established commercial character in this district is a branch of the Banco de Sonora, in Nogales, the parent being at Hermosillo, Sonora.

When it is considered that nearly one-half of the importing mercantile firms (excluding Chinese merchants) within this consular district are American, that the only two prominent manufacturing establishments are American also, while but 4 mining companies among the 150 are foreign corporations, the remaining 144 being American enterprises, it does seem as if the field should look inviting to American financiers. There is much complaint among American business firms in this district of the hardships they encounter in matters of loans and exchange. Instead of generous treatment and reasonable rates of interest a most exacting policy in regard to security is pursued, while the interest rates are almost ruinous. Twelve per cent is the minimum rate for loans, with hardly any limitations, the prevailing rates above the minimum being 15 and 18 per cent, or even more. An institution established by Americans and conducted upon conservative banking principles, ready to make loans at nonprohibitive interest rates and affording exchange in the same spirit, would easily have the preference of depositors and would soon control the banking transactions of Americans engaged in mining, commercial, and all other pursuits in this consular district.

REPUBLIC'S FRIENDSHIP.

PRESIDENT DIAZ'S MESSAGE—A HOLIDAY GREETING.

In his recent message to Congress, President Diaz, of Mexico, said that the long-discussed question of an international dam in order to

insure the equitable distribution of the waters of the Rio Grande had taken satisfactory form in the treaty signed at Washington and at Mexico.

The finances of the nation, he said, were in the most satisfactory condition, and that there would be a substantial surplus. There had been coined and was now in circulation gold money to the value of \$43,000,000, while the monetary commission still has gold on hand to the amount of \$16,000,000 yet to be coined. The gold standard had been attained without any sacrifices on the part of the nation.

Mexico's national holiday in celebration of the anniversary of its independence was observed enthusiastically over the country, and great friendship was shown in addresses toward the United States. At San Luis Potosi the orator spoke of friendship existing between Mexico and the United States, and then referred to the parts played by the Presidents of the sister Republics in the bringing about of peace among Honduras, Guatemala, and Salvador recently. Thousands of people burst out in a mighty roar of "vivas" for President Roosevelt and President Diaz. The demonstration was perhaps the first in the history of the country made in favor of a foreign president.

CANADA.

NOVA SCOTIA INDUSTRIES.

PROFITABLE ACTIVITY IN ALMOST EVERY LINE OF PRODUCTION.

Consul G. N. West, of Sydney, reports the conditions in his part of Nova Scotia to be prosperous and progressive. He notes movements that indicate opportunities for American manufacturers. He writes:

The last six months of 1905 were in all respects productive of greater activity in all lines of commercial business than were the preceding six months, owing largely to the cold weather, which kept the harbors closed with ice until the middle of May. However, with the advent of warm weather, business of all kinds began to advance and has continued to do so. Confidence was restored in the iron and steel plant by the successful production of steel rails by the open-hearth process. Large orders were secured not only for rails, but for rods, billets, blooms, and slabs. The coal companies increased their shipments. Money became more plentiful and consequently the merchants replenished their stocks, most of the goods coming from the United States.

It is a noteworthy fact that American hats, both hard and soft felts, boots and shoes, silk and muslin waists, sheetings, calicos, and other washable dress fabrics are steadily gaining a foothold, the sales increasing every year.

The total value of declared exports to the United States for the calendar year 1905 was \$1,480,923, of which \$1,298,751 was from the six consular agencies and \$182,172 from Sydney. The principal articles from Sydney were: Creosote oil \$34,305, coal \$32,985, pitch \$29,989, pig iron \$29,285, canned lobsters \$11,070, and pulp wood \$6,325.

The Dominion Coal Company, during the six months, mined and shipped 1,746,702 tons of coal, of which 298,920 tons went to the United States. The number of employees engaged in mining and

transporting coal was 7,000. The Nova Scotia Steel and Coal Company also shipped 100,000 tons of coal to various Canadian ports.

The fall fishing season, upon which so many of the people in the northern and eastern parts of Cape Breton Island depend, was good so far as cod and hake were concerned, but the mackerel catch, which brings the largest returns, was almost a complete failure.

Agriculture, which had been carried on in a small and unproductive way, has received more attention during the past few years, a more careful and scientific mode of farming having been adopted with the results that farmers have been substantially rewarded for their efforts. Especially was this true in regard to small fruits, garden vegetables, and apples and plums. The quality and quantity of root vegetables has also been largely increased and improved.

COMMERCE OF SAULT STE. MARIE.

LARGELY WITH THE UNITED STATES—EFFORTS TO SAVE TIMBER.

Consul G. W. Shotts, reporting on the trade of Sault Ste. Marie, Ontario, for the last six months of 1905, says:

The total forest products exported hence to the United States amounted to \$2,112,626, of which \$1,704,208 was lumber and \$194,207 was mechanically ground wood pulp. All other articles exported were valued at \$228,050, making a total of \$2,340,676. Practically all the wood pulp and about 90 per cent of all the products of the forest are shipped to the United States.

The Government is exercising great care in preserving the timber, requiring all that is cut to be taken under its supervision, prescribing the sizes at which trees may be cut down, and seeing that as little damage as possible is done to the smaller growths. Mining was unusually active, mostly in prospecting and development of the different properties. The Helen Iron Mine is the only one fully developed. The value of ore shipped to the United States for the six months under consideration was \$174,809, or about 60 per cent of the output. The greatest interest has been centered on copper properties, of which there are quite a number under development. Only small amounts of ore have been shipped, mostly in carload lots, for testing purposes. Some of these have shown 8 to 12 per cent copper. At least 75 per cent of the mines, as well as the sawmills are owned, controlled, and operated by Americans.

ST. JOHNS A WINTER PORT.

HANDLES LARGE AMOUNT OF EXPORTS FROM UNITED STATES.

Consul G. Willrich reports that St. Johns, New Brunswick, is rapidly rising in importance as a winter port. The volume of its trade is growing fast. The consul writes:

St. Johns has become the chief port of the Dominion of Canada for its trans-Atlantic business during the winter months when the St. Lawrence River is closed to navigation. In 1895-6 the export trade of the port amounted to \$3,000,000, while in 1905-6 it reached \$23,615,000. Of this amount Canada furnished products valued at \$14,541,217, of which \$13,921,749 worth were sent to the United

Kingdom and \$619,468 to South Africa. The value of the exports of American origin was \$9,010,784, of which \$8,064,664 worth went to the United Kingdom and \$946,120 worth went to South Africa.

The exports of goods from the United States via St. Johns to the United Kingdom consisted of the following principal articles: Cattle, 13,508; sheep, 1,575; meat, 56,193 packages; grain, 206,987 bushels; lard, 201,044 packages, and flour 143,407 packages. The United States merchandise exported through this port to South Africa consisted of meat, machinery, agricultural implements, flour, lard, and poultry. The total shipments of grain in 1895-96 amounted to 272,910 bushels, while in 1905-6 the shipments reached 6,764,499 bushels.

MANITOBA VEHICLE COMPETITION.

AMERICAN CARRIAGES NOT IN FAVOR—WAGON SALES DWINDLING.

Regarding trade in Manitoba in carriages and other vehicles, Consul S. H. Shank, of Winnipeg, does not give much encouragement for American business. He writes:

At the present time there are very few American carriages or buggies shipped into this part of Canada, the only ones being a few novelties in pony vehicles. Perhaps two carloads will cover the total imports of American buggies and carriages during the year. The duty on carriages is 35 per cent, with a minimum value on which duty may be imposed of \$50, which makes it practically impossible for the American manufacturer to compete with the Canadian. I am informed that two or three American concerns have attempted to introduce their lines of manufacture here, but without success.

A somewhat different condition obtains in regard to farm wagons. Possibly 20 per cent of the farm wagons sold here are of American manufacture, but the number is gradually decreasing. It has been stated by the farmers that they could afford to pay \$10 more for the American-made wagon than for the Canadian made, as the American is so much better that it is cheaper for them to pay the higher price. That the American wagon is a better article than the Canadian is explained by the fact that the Canadian manufacturer has had difficulty in securing good material for his product, a great part of it being shipped from the United States, and further by the fact that not having been in the manufacturing business for so many years as his American competitor, his material is not properly seasoned.

[The names of Winnipeg vehicle dealers furnished by Mr. Shank are on file at the Bureau of Manufactures for reference.]

HAWAII.

FUTURE COMMERCIAL DEPOT FOR PACIFIC OCEAN COUNTRIES—INDUSTRIAL AND TRADE LIFE OF THE ISLANDS.

W. A. Graham Clark, special agent for the investigation of the cotton-goods trade of China, while en route thither was detained at Honolulu by a steamship wreck, and made use of his time in making a

study of the commercial features of the Hawaiian Islands. His report from Honolulu, which follows, discusses the questions of the hour relating to the foreign trade of the islands and their economic development:

Hawaii, the "Crossroads of the Pacific," is a central point for the great ships that thread their way back and forth across the Pacific carrying the interchange of the muscle with the brain products of the world. Politically, commercially, and strategically it is important to the United States and its importance will be vastly increased with the opening of the Panama Canal. As westward the tide of empire takes its way and our western shores are peopled and the Orient arouses to its strength, it is probable that it will be but a few years before the tide of the world's greatest commerce will flow through its ports. Situated in a direct line between Panama and Japan, between Sydney and Seattle, the nearest route between San Francisco and the Philippines, and touched by the majority of the great liners plying between the Occident and the Orient, its importance will grow with the expansion of trade. The Hawaiian Territory is composed of eight principal islands, with a population according to census of 1900 of 154,001. That was six years ago and there is no official census available since, but it is estimated that the present population is about 165,000, divided, approximately, into 30,000 natives and 7,000 Kanakas, 65,000 Japanese, 40,000 Chinese, 8,000 Koreans, 7,000 Portuguese, and 8,000 whites. This is about 8 white people to 157 Asiatics, Portuguese, and native Hawaiians. That the above slight increase of population is correct is shown by the fact that while the Japanese numbered 61,115 in 1900 and 38,479 have since been admitted, an unofficial census in April by Editor Shiozawa, which is believed to be approximately correct, makes the present Japanese population less than 65,000.

At present Hawaii Territory is distinctively a one-crop agricultural country. Sugar, protected by the tariff, has become the one great product and forms 95 per cent of the total value of the exports from the islands. Of the total exports of \$26,993,824 in 1906, \$25,495,427, or 94.4 per cent, was sugar; and of the total of \$36,318,768 in 1905, \$35,112,127, or 96.7 per cent, was sugar. Relying on one product the prosperity of the islands, to a considerable extent, rises or falls with the price of sugar.

LARGE SUGAR YIELD.

Sugar being the money crop of the islands, the cane is cultivated on a large scale and is a very important industry, covering about 200,000 acres. In the use of improved methods in this industry and in yield of cane per acre—between 4 and 5 tons—and yield of sugar per ton Hawaii probably leads the world. Steam plows are used in the fields, private steam railways on the plantations carry the cane from the field to the mill, where the latest steam and electrical machinery is used, and then it is shipped on the plantation railway to the plantation wharf to be carried to Honolulu or Hilo for shipment east. Vast irrigation works and costly pumping stations have been installed. Some of the mills cost over a million dollars each, and the companies, of which there are over 60 in the islands, are capitalized at from a few thousands to five

millions. The quantity and value of the sugar exported for the last ten years is as follows:

Year.	Pounds.	Value.	Price per pound.	Year.	Pounds.	Value.	Price per pound.
			<i>Cents.</i>				<i>Cents.</i>
1897	431, 196, 980	\$13, 164, 379	3. 05	1903.....	774, 825, 420	\$25, 665, 733	3. 31
1898	499, 766, 798	16, 660, 109	3. 33	1904.....	736, 496, 992	24, 359, 385	3. 30
1899	462, 299, 880	17, 287, 683	3. 72	1905 {raw.....	811, 603, 329	33, 946, 040	4. 19
1900	504, 713, 105	20, 392, 150	4. 05	{refined ..	21, 118, 308	1, 166, 108	5. 52
1901	690, 877, 934	27, 093, 863	3. 92	1906 {raw.....	712, 560, 997	23, 840, 803	3. 35
1902	720, 553, 357	24, 147, 884	3. 35	{refined ..	34, 041, 640	1, 654, 624	4. 86

DEVELOPMENT OF OTHER INDUSTRIES.

The Territory needs diversification of industries and concerted efforts are being made to this end. The shipment of pineapples and of bananas has developed into quite an industry and efforts are being made to push the sale of the alligator pear, mangoes, and other tropical fruit. First-class coffee is raised and with favorable markets would develop rapidly. Tobacco is being tried and has had some success. Sisal is an experiment that promises to prove of great value. Rubber is being tried with favorable prospects, but is too young to secure any marketable results. Forestry work is being judiciously inaugurated, both for soil protection and for its wood value. One tree, the koa, is a fine, close-grained wood resembling mahogany and is very valuable. In raising fruits and other products as above there has been considerable enterprise shown, but they do not as yet figure much in commercial statistics because practically all are consumed in the islands.

LACK OF LABOR.

In the sugar-cane cultivation one of the greatest difficulties from the beginning has been that of sufficient labor, and twenty-five years ago the planters organized mainly for this purpose under the name of the Planters' Labor and Supply Company. More labor is to-day one of the crying needs of the Territory.

The average laborer of the plantation gets about \$21 a month, whereas in railroad construction and other work on the Pacific coast he can make \$1.75 a day and up, which results in Hawaii, as one of the leading men here puts it, "being at present little more than a sieve through which the immigrants are strained, the usual result following, that the strongest and most energetic go, leaving behind the least efficient or those who have individually established themselves in business."

Since annexation, under our alien-labor laws, individuals and associations can not import contract labor, so most of the immigration, consisting principally of Japanese, is voluntary and largely transient. It has been construed, however, that this law does not apply to the territorial government, and so the work is now carried on by them. One of the latest experiments was the importation of a couple of hundred of the sect of Russians known as Molokans, but it proved a failure. The Portuguese, while having a tendency to drift away from the plantations and build up small homes and truck farms of their own, are among the steadiest and most industrious of the immigrants so far secured, and the Territory now has an agent in the Azores trying to induce further immigration of this class.

The Japanese make good laborers and are apt and intelligent, but are, as a rule, ambitious and restless and rather given to strikes. They tend to drift into the higher classes of labor about the plantation and leave in large numbers for the more remunerative work on the coast.

CHINESE LABOR MOST DESIRABLE.

The plantation owners are strongly in favor of Chinese as furnishing the labor best suited for work in the cane and rice fields, because of his similar native environments. He makes a steady, law-abiding, efficient plantation laborer, and is content to work for small wages. As there is no American labor, practically, in the sugar-cane and rice fields to be affected by their competition and they can be readily imported and furnish the labor best fitted for the climate and the work, these facts are being strongly urged by plantation owners and others as reasons for a future modification of our Chinese-exclusion act. Some modification allowing the importation of a definite number for a definite term of years would undoubtedly develop the islands wonderfully, as labor is its great need. On the other hand, those not directly interested in the plantations oppose importing Chinese, as tending to increase the population of un-American elements. Both on account of the climate and the contact with the Asiatic and native labor, very few whites are to be found in the fields.

Efforts are being made to retain a larger proportion of the Japanese and other immigrants that at present make only a temporary stay here. One cause of this unrest is the large plantation system where all the land for miles around is owned by one corporation. This does not give much chance for real home life or for improvement on the part of the individual laborer. The best plan to secure and retain a supply of steady, satisfied labor would be for the plantations to give or sell land to tenants for homesteads. Land can not be moved, and a family owning a homestead on which they have possibly made improvements is vastly less likely to remove than in the usual case where they are simply tenants at will. Some form of profit sharing would also have a strong tendency to promote more interest in their work and to retain a better class of labor.

STEAMSHIP COMMUNICATION.

Of the sixteen regular through liners there are five that make regular runs to San Francisco that can not be used for Hawaiian freight or passengers, owing to the operation of our coasting laws forbidding shipment between American ports except in American bottoms. This has in some cases, as instanced especially in fruit shipments and in cases of business men in a hurry, affected adversely the business interests of the islands, and has been commented on in published reports by the governor, by the chamber of commerce, and by business organizations. The minimum penalty is \$200, and cases are noted where men have paid their fine in advance and taken these boats under pressure of necessity. When the coasting law was passed the United States had no noncontiguous territory, and so the law was not formed for such a case. It would help the business interests of the Territory to make noncontiguous territory an exception to this rule, or else reduce the fine to \$25 or \$50.

Besides the five big through steamship lines the American-Hawaiian Steamship Company operates seven big freighters between Hawaii

and New York, via the Horn, and two between Hawaii and Pacific ports, San Francisco, Seattle, and Tacoma. They handle the bulk of the sugar trade which is shipped partly to San Francisco refineries, partly overland to New York, and partly around the Horn to New York. Around the Horn is cheapest, and the larger part of the sugar goes this route, but it takes from two to four months. This line is now making arrangements to divide its fleet between the Atlantic and Pacific and ship to Salina Cruz in Tehuantepec Bay, then over the Mexican National Railroad to Coatzacoalcas, and thence again by ship to New York. This involves breaking cargo, but the company will guarantee delivery in thirty-two days, and the rate will also be slightly reduced. This will further stimulate the sugar industry, one of the main drawbacks of which has been the delay in reaching New York.

EXPORTS AND IMPORTS.

The commerce of Hawaii for year ending June 30, 1906, as compared with 1905, shows a falling off in value of about one-fifth, or in round numbers \$10,000,000. This is a discouraging showing, but in some respects, on closer analysis and remembering that permanent commercial prosperity of the islands depends on diversification of industries, there are a good many redeeming features. Studying the exports of domestic merchandise to the mainland, the exports to foreign countries being negligible, we find that the decrease was \$9,208,646. The decrease in sugar alone, owing both to a small crop and to the low price, was \$9,618,274. This shows a gain of \$409,728 in the value of shipments of other domestic merchandise, which, considering the efforts that have been put forth, is an encouragement as showing progress along this line. Considering the total exports and imports of the islands, including both merchandise and money, we find:

Exports and imports.	1905.	1906.	Decrease (—), Increase (+).
Total exports.....	\$36,318,768	\$26,993,824	—\$9,324,944
Total imports.....	14,871,144	15,639,874	+ 768,730
Total trade.....	51,189,912	42,633,698	— 8,556,214

From above we see that there was in favor of the islands in 1905 the enormous trade balance of \$21,447,624, but in 1906 this had dropped to \$11,353,950. That the great decrease did not create disaster to the islands was simply due to the fact that the remaining balance was still so largely in their favor. On the other hand, the full effort of the large favorable trade balances are not as largely felt in the development of the islands as they might otherwise be, owing to the fact that much of the large plantation stock is owned by persons residing outside the territory—Germans, British, and Americans—and in favorable years a not inconsiderable portion of the profits is lost to the islands.

DIVISION OF COMMERCE.

Being an American territory and situated as it is, of course the great bulk of the trade is with the mainland. This is shown as follows:

Exports and imports.	1905.	1906.	Decrease(-), increase(+).
Exports to United States	\$36,259,207	\$26,937,511	—\$9,321,696
Imports from United States	11,856,180	12,364,632	+ 508,452
Exports to foreign countries	59,561	56,313	— 3,248
Imports from foreign countries.....	3,014,964	3,275,242	+ 260,278

With regard to Hawaii's principal staple, there was exported to the mainland in 1906 712,560,997 pounds of raw sugar valued at \$23,840,803, against 811,603,329 pounds valued at \$33,946,036 for 1905. This enormous decrease is only partially and in a slight degree compensated for by the fact that the amount of refined sugar increased from 21,118,058 pounds valued at \$1,166,091 in 1905, to 34,041,640 pounds valued at \$1,654,624 in 1906, a gain of \$488,533. As sugar refining is a comparatively new industry here, this increase, especially in a year when the total crop decreases, is encouraging to those favoring diversification of industries.

Other shipments of domestic merchandise showing a healthy increase in the comparison of the two years are as follows: Rice shipments about doubled with a gain of \$141,598 from 2,771,083 pounds valued at \$81,414 in 1905, to 5,739,500 pounds valued at \$223,012 in 1906. At the same time rice shipments from the mainland dropped \$138,166. Raw coffee shipments increased from 1,437,053 pounds valued at \$173,617 in 1905, to 2,147,154 pounds valued at \$248,593 in 1906, a gain of \$74,976 in value. The shipments of canned fruits increased from \$66,876 to \$152,582, or a gain of \$85,706. Fruits, green, ripe or dried, increased \$11,152. Bee products, honey and beeswax, amounted to \$133,170, or an increase for the year of \$46,450. Hides and skins show an increase of \$42,333; leather, \$14,591; tallow, \$7,046, and chemicals, dyes, drugs, and medicines, \$7,842. On the whole, the above is encouraging to the advocate of diversified industries.

CUSTOMS REVENUE.

The customs receipts for the year ending June 30, 1906, were \$1,218,764. Last year the receipts were \$1,043,340. These receipts of course go to Washington. Before annexation they were used for the islands, and there is quite an agitation being carried on to induce Congress to pass an act under which the Secretary of the Treasury shall cause to be set aside, for a period of 20 years, 75 per cent of the customs and internal revenues from Hawaii, to be used in Hawaii, as may be directed by Congress, for the erection of educational and Federal public buildings, and for harbor improvements and Federal military and naval defenses.

FARM AND DAIRY.

CEREALS AND MEAT, BUTTER AND CHEESE.

MARKET CONDITIONS AND DEMANDS IN MANY COUNTRIES.

WHEAT CROP IN RUSSIA—INCREASED SALE OF FLOUR IN MALTA— BREAD PRICES IN ENGLAND.

Consul J. H. Grout, of Valetta, reports a favorable opportunity for American flour merchants or manufacturers to get into the grain markets of Malta. What is wanted is a wheat or flour that will make dark bread. Russian wheat does this; but this year's crop in Russia is reported almost ruined by rains. Russia has no surplus or left-over stock to draw on. America's harvest this year has yielded a large surplus. The consul says:

Malta is taking advantage of it; and I am given to understand by responsible parties that shipments have been ordered from New York to be delivered in the very near future. One of the factors that has made this possible has been the reorganization of the direct line to Malta—the Austro-American line, which is to have regular monthly sailings, beginning September 21. One of the items that has always worked to the disadvantage of American wheat has been that wheat being dutiable here and the tax being assessed upon the measure rather than the weight, the Russian wheat, being much heavier, has proved more profitable to handle. Malta has no use for American soft wheat. Only the hard red variety is desired.

Local merchants report that an advance of \$1.45 per quarter has been made recently on Russian wheat, with every indication of a further raise. A few days ago tenders were opened by the local government authorities and a contract was awarded to a local merchant for Manitoba hard wheat at \$7.53 per quarter. The lowest offer for Russian wheat made was \$9.97 per quarter. A few shipments of American flour are being received, but not to the extent as formerly. At one time we had all but gained control of this market. At the time of the Russian-Japanese war it suddenly dropped, thus giving an impetus to local millers.

SWEDEN BUYS LITTLE FLOUR.

Consul Robert S. S. Bergh, of Gothenburg, has talked to some of the Swedish importers who claimed that on account of the high prices it is very difficult to buy any flour from America, and that most of the wheat flour imported comes from Hungary.

The high import duty on flour—6.50 kronas per 100 kilos or about 79 cents per 100 pounds—is also an impediment. Therefore the wheat

is imported and ground in Sweden, and lately a considerable number of flour mills have been built, in addition to those which existed before. During the year 1904 Sweden's import of wheat flour was only 16,049,600 pounds, while the import of unground wheat was 490,255,000 pounds. The wheat comes from the United States, South America, and sundry other countries. [Flour importers and importing agents of general merchandise at Gothenburg are named and lists can be secured from the Bureau of Manufactures.]

FLOUR MILLING IN CHINA.

The large flour mill being erected at Hongkong, the British possession in China, is regarded as an important commercial venture. The capacity will be 8,000 sacks weekly, with which they propose to supply the city and the neighboring districts, ultimately developing an export trade. The requisite wheat for grinding will be drawn from the Canton delta and other parts of south China. The mill will be driven by electricity derived from water power. The Chinese flour mill at Chinkiang had a successful trade in 1905, with an output of about 5,000,000 pounds. Three grades of flour were manufactured, with local prices of \$1.95, \$1.75, and \$1.50 per 100 pounds.

LOOKING FOR CHEAPER BREAD.

Consul W. C. Hamm, at Hull, sends the following extract from a London newspaper as an illustration of the general belief in England that a fall in the price of bread will result from the large wheat crops of this season:

If the forecast of the home flour merchants is correct, bread is likely to be cheap this winter—a circumstance which will be welcomed by the masses. A large flour importer says that as far as can be learned the wheat crop this year has been vast, and far greater than any recent harvest. The bulk of the British flour is obtained from Indian, American, Canadian, and Argentine wheat, and the surplusage is reported to be very heavy. Flour, of course, will be cheaper, and then bread should relatively fall in price, but one of the main factors in giving us a cheaper loaf is the extraordinary competition which has sprung up in the flour trade. The Americans at one time supplied the British market, and they lost the trade, but now they are making strenuous efforts to recapture it. Other countries have to do something to prevent being ousted, and as for English millers they are having a bad time of it. I know of two large provincial mills which did an excellent trade some years ago, but now they are closed, and not because of declining business, but because they had to cut and whittle their prices.

ADVANCES IN GERMANY.

ENORMOUS INCREASE IN PRICES IN A SINGLE YEAR.

Consul W. Bardel, of Bamberg, reporting on the prices of agricultural and food products in Germany, furnishes a table giving the prices for 1905 and 1906. The prices in the first table are per metric ton of 2,205 pounds avoirdupois in August of each year. The tables show

that, with the exception of potatoes and hay, each article enumerated is dearer now than it was in 1905:

Articles.	1906.	1905.	Articles.	1906.	1905.
Wheat.....	\$41.17	\$39.27	Lentils.....	\$122.09	\$91.68
Rye	35.47	33.80	Potatoes	12.64	12.78
Barley.....	35.22	33.32	Straw	10.47	10.12
Oats.....	38.08	30.94	Hay.....	11.09	13.47
Peas.....	57.12	55.93	Beef at wholesale.....	305.12	292.74
Beans	78.54	76.87			

The following table gives the retail prices per kilo equal to .2.2 American pounds of the article indicated:

Articles.	1906.	1905.	Articles.	1906.	1905.
Beef.....	\$0.39	\$0.36.9	Butter	\$0.58.5	\$0.57.8
Pork.....	.40.5	.39.8	Lard .....	.42.6	.41.7
Veal.....	.39.3	.37.8	Wheat flour.....	.07.4	.07.1
Mutton.....	.39	.36.6	Rye flour.....	.06.4	.05.9
Bacon .....	.44	.42.6	60 eggs.....	.93.3	.92.3

FOOD INSPECTION.

MEAT REGULATIONS IN HUNGARY.

Frank D. Chester, consul-general at Budapest, forwards a translation of the present Hungarian meat-import regulations with special reference to American meat. Mr. Chester comments as follows:

Prices for meat are now very high in Hungary. Servian animals and meat are excluded entirely at the present time. In 1905 Austria-Hungary imported from the United States 145,283 pounds of prepared meats, of which 39,461 pounds were entered in Hungary. It is also stated that 47,399 pounds of American sausages were imported into the monarchy, none of which came into Hungary. Of 5,512 pounds of meat preserves 5,071 pounds came to Hungary. Of meat extract, 60,186 pounds was imported into the monarchy, of which none came to Hungary. It is therefore desirable that prepared as well as preserved meats, other than pork, should be allowed entrance here, especially at Fiume via the Cunard Line.

Following is the restriction governing the import of animals and meat from countries outside of Europe:

In accordance with the instructions of the Royal Hungarian ministers of commerce, finance, and the interior, I order that all animals, as well as fresh and prepared (salted, dried, smoked, pickled, and boiled) meat, may be entered for import into the lands of the Hungarian Crown only by my previous permission in each special case and under conditions to be prescribed by me. This order for the present does not affect the ordinance of the Royal Hungarian minister of finance issued on December 2, 1891, by which the order prohibiting the import into the lands of the Hungarian Crown of swine, all kinds of pork meat, bacon, and every sort of sausage from the United States of North America, was rescinded.

Dated at Budapest, July 14, 1906, and signed by Darányi, Royal Hungarian minister of agriculture.

The ordinance of the Royal Hungarian minister of finance dated September 30, 1894, addressed to the frontier custom-houses regarding the import of American pork meats reads:

Supplementing my circular ordinance of December 2, 1891, in the matter of the rescinding of the prohibition of American swine and pork imports, I remind the frontier custom-houses that such shipments may be admitted to customs entry only when their unobjectionable character is proven conformably to this ordinance by an original certificate of the competent American authority. Copies of the original certificates, even if they are authenticated, and certificates to the same effect of a sanitary-police examination held elsewhere, are not to be accepted.

Dated at Budapest, September 30, 1894, and signed by Marffy for the Royal Hungarian prime minister charged with the conduct of the ministry of finance.

UNITED STATES REQUIREMENTS.

STRICT SCRUTINY OF LABELS FOR CANNED GOODS.

Secretary of Agriculture Wilson announces that, in the enforcement of the new meat inspection law from October 1, anything savoring of a false or deceptive name will not be tolerated.

For instance, the picture of a pig on a beef-product label or of a chicken on a veal or pork product will not be permitted. Geographical names are allowed to be used only with the words "cut," "type," "brand" or "style," except upon foods produced or manufactured in the State named. For instance, "Virginia Ham" must be marked "Virginia Style Ham," and a substance composed of lard, stearin, or other animal fat or vegetable oil may be labeled "Lard Compound." A Swiss concern selling dainty canned-meat goods in the United States has asked the American authorities for an exemption from these new canned-meat laws.

SHIPPING REGULATIONS.

The collector at the port of New York has issued a notice intended to apprise shippers of the exact requirements of the new meat-inspection law which took effect October 1. In this notice he declares that "no clearance will be granted any vessel sailing for ports in Continental Europe, Great Britain, and Ireland, carrying meat or meat-food products unless the same have been marked 'U. S., inspected, and passed,' and also accompanied by a certificate of inspection."

SUGAR INDUSTRY.

PROPOSED RECIPROCITY BETWEEN BRAZIL AND CANADA.

Consul-General George E. Anderson, of Rio de Janeiro, reports a movement among Brazilians to effect a treaty of reciprocity with Great Britain by which, for benefits conferred upon Canada by Brazil in the matter of articles imported from Canada, concessions to Brazil, particularly to its sugar planters, shall be made by the Dominion. He writes:

The indications are that sugar interests here will force the Government to take up the proposal to effect a reciprocity arrangement with

Canada whereby Brazilian sugars will be admitted into the Dominion free of duty or at least at greatly reduced rates in return for tariff concessions by Brazil on Canadian products. The necessity of securing wider markets for their products is appealing to Brazilian sugar men strongly, as it appears that the markets of the United States are being effectively closed against them. In the proposed reciprocity arrangement it is expected that Canada could secure concessions on its flour and codfish. Present Brazilian duties are so high, however, that unless the concessions are very material they would not be enough to enable the Canadians to move their goods in any considerable volume. On the other hand, the arrangement would be advantageous to the Brazilian interests. A decade or so ago Brazilian sugars went to Halifax and Montreal in considerable quantities and are said to have been popular with refiners. The existence of reciprocal treaties with West Indian provinces, however, has led Canada to draw most of its sugar supply in recent years from that source. Brazilian sugar men believe that there would be a big future for their product if given proper assistance in this and some other lines.

Meanwhile the depression in Brazilian sugar circles continues. At the present time the market is almost at a standstill. One of the worst features of the situation is found in the fact that coffee valorization has set the sugar interests in the same direction and the air is full of all sorts of schemes to give to this product of Brazil a fictitious value like that expected to be attained for coffee. The result is that comparatively little effort is being directed toward cheapening the cost of the product, thus securing markets which can not now be secured. So long as the present agitation, for government aid and legislative remedies for a condition which really represents nothing more than too high cost of production to compete with the products of other nations in some markets, continues, it is not likely that there will be any material change in the sugar situation of the country.

CUBA'S CROP.

GERMAN SCIENTIST FEARS EMPIRE CAN NOT COMPETE AGAINST ISLAND.

The prospective attainment of the Cuban sugar crop is figured by Prof. Julius Wolf, of the German University of Breslau, to at least five times its present crop.

He states that the present cane fields of Cuba cover scarcely more than 1,500 square miles, and that, despite this fact, Cuba already produces more than half as much sugar as Germany, but that 44,000 square miles of arable land are available in Cuba for sugar culture. Professor Wolf estimates that sugar can now be produced in Cuba at \$1.20 per 100 pounds, which, he says, is very much less than the cost of producing sugar in Germany. He indicates a great fear of the injurious competition of Cuba with the Germans for supremacy in sugar production. The Louisiana Planter, however, shows the improbability of these fears in the following statement:

It is necessarily flattering to Cubans to know what natural conditions they have in the way of sugar production, but for Cuba to produce five times its present crop, or say 6,000,000 tons of sugar, would require such a readjustment of the labor question there as seems impossible for many years to come.

ECONOMICAL REFINING.**GROWTH AND FACTORY METHODS IN MADEIRA.**

Consul Maxwell Blake, of Funchal, makes a complete report on sugar-cane growing on Madeira Island, of which the following is a summary:

Sugar cane was first introduced in Madeira by Zargo about 1425, and subsequently was transplanted to the West Indies, where its extensive cultivation has produced so much wealth. Cane growing retrograded in Madeira owing to carelessness and the destruction by a grub. Vineyards and wine making became the industry, which in turn was almost ruined for a time by a fungus. Sugar-cane planting was resumed, and to-day is a steady industry in the lower irrigable parts of the island. The tenant system in vogue, however, reduces the acreage production about one-half.

On a given space of 2.5 acres, on which I have obtained reliable statistics, with the cultivation of the crop by the landlord himself, the cost of culture, manure, water, etc., amounts to \$432. For the sale of young plants and the yield of crop—40,500 kilos (kilo=2.2 pounds) at 50 cents per 30 kilos—the returns are \$790, leaving a profit of \$358. The tenant system brings the production down to about 2,000 kilos on 2.5 acres.

The method of refining sugar by Hinton & Sons, of Funchal, is the successful Daudet chemical process for the extraction of beet juice applied to cane, practically minimizing the percentage of loss under the old system of double crushing to an irreducible 1 per cent. Under this process, after the juice has been extracted by crushing, it is concentrated by evaporation and purified by chemical treatment, following which it is crystallized by a centrifugal machine composed of dual cylinders, one of fine net and an inner solid one. These being subject to a proper revolutionary velocity, the liquid elements are thrown off, leaving a deposit of sugar crystal, the residue of juice being afterwards distilled into spirit, while the pulp resulting from the initial process of crushing is converted into operative fuel. The consumption of the mill, which employs over 300 laborers, is about 500,000 pounds daily, representing an approximate value of \$4,000.

BRITISH BEET-SUGAR PROJECT.

Consul F. W. Mahin writes that the Lincolnshire beet-sugar enterprise, the subject of several reports from the Nottingham consulate, has now advanced another stage. A provisional site for the proposed factory has been selected and negotiations with English railroads for transport facilities are under way. This point has been reached after investigations, which convinced the promoters of the project that sufficient quantities of sugar beets, adequately saccharine, will be grown in the neighborhood of the proposed factory, and that a fair profit can be made upon the product.

BELGIAN PRODUCTION.

Belgium's extensive cultivation of sugar beets is nearly sufficient for its 125 sugar factories and refineries. The only factories importing beets are near the frontier. The importations in 1905 amounted to

317,173 tons against 125,572 tons in 1904. Belgium consumes only 20 per cent of the sugar it produces, exporting the rest, amounting to 94,225 tons in 1905 and 130,031 in 1904. The yield for 1905 was 20 per cent in excess of that of 1904, due to an increase in acreage, and to better crops.

BUTTER AND CHEESE.

HIGHER PRICES REALIZED IN MARKETS OF GREAT BRITAIN.

In regard to cheese imports a British concern states that out of a total import of 130,062 tons of cheese into the United Kingdom for the year ended June 30 last, 95,884 tons came from Canada, which was over eight times the quantity received from the next largest exporting country, Holland.

Canadian cheese is not only capturing the bulk of English markets, but is securing higher prices. The London quotations for choicest Canadian cheese for the past year averaged more than 2 cents a pound over the average of the previous ten years. This is in strong contrast to the year before, when the average was $1\frac{1}{2}$ cents below that of the decade. The firm looks for still higher values during the coming season.

So far as can be estimated the production of butter and cheese in the United Kingdom is likely to be much smaller than last year, owing to the dry spring and hot summer. The milking herds of the United Kingdom have steadily increased during the past three years, and the number of milk cows, recently reported at 4,211,917, is the highest figure ever reached, yet the increased city demand makes the sale of milk more profitable than the making of butter or cheese. The usual receipts of butter from Canada are expected, although the high prices ruling for cheese is inducing Canadian factory managers to turn their attention more to that commodity.

From the United States it is almost certain, the firm states, that smaller butter supplies will arrive. Already sales of New Zealand butter have been effected for October-March shipments at higher prices than ruled last season, and indications appear to point to these conditions being maintained for some time to come.

HIGHEST PRICE FOR CHEESE IN CANADA.

Consul H. D. Van Sant transmits from Kingston, Canada, a newspaper statement of the high-water mark in prices received for cheese. At an auction by the cheese board at Kingston on September 20, $13\frac{1}{2}$ cents was offered by the buyers, and the whole exhibits were sold. It is stated that never before has cheese brought so steady prices as this season, and the Canadian farmers' pockets were never so bulging.

BUTTER IN THE ORIENT.

CHEAP AUSTRALIAN PRODUCT THE STRONGEST COMPETITOR.

A Chicago firm is seeking to extend its butter trade in the Orient, and its letter of inquiry to Consul-General Amos P. Wilder, at Hong-kong, brings forth some desirable information. It may be stated that

American butter exports are growing, the quantities having advanced from about 10,000,000 pounds each in 1904 and 1905 to 27,360,537 pounds in the fiscal year 1906 ending June 30, the value trebling to \$4,922,913.

The share going to Hongkong in 1904 was \$877, in 1905 \$1,144. To the Chinese Empire the shipments decreased from an annual average of \$4,500 for 1904 and 1905 to \$2,929 for the year 1906. In American oleomargarin, however, all Asia took \$2,703 worth in 1904, \$11,774 in 1905, and \$25,699 in the fiscal year 1906. The trade difficulties at Hongkong are explained in the following letter from Mr. Wilder:

The Chinese do not use butter to any extent. The consumption of imported butter in Hongkong by the foreign "European" population is about 200 cases a month, 56 pounds to the case. This is butter in rolls or bulk. The navy, and to a less extent the merchant marine along the coast, are supplied from here by perhaps the use of 2,000 cases of 100 one-pound tins per annum. Two thirds of the butter is from Australia, the balance Danish and French. Australian butter is laid down here at from 40 to 50 cents Mexican per pound wholesale (in United States currency one half of these figures). Twenty-five cents gold often buys choice Australian butter in pats at wholesale. Tinned butter is laid down often at 28 cents gold. It is for this reason that despite American efforts for many years to get a share of the butter business in the Orient there is little to show for it. Australian butter is too cheap.

LACK OF INTEREST IN OLEOMARGARINE.

The cheapness of good imported butter here is one of the principal reasons why dealers show lack of interest in oleomargarine. Dealers report prejudice on the part of customers, but American manufacturers are often able to overcome this by excellence of product. However, the Chicago packing-house revelations are regarded as highly sensational by the English who dominate this port, and their newspapers abound with reports of and comments on the system. One dealer tells me that he has long tried to unload at 15 cents Mexican a considerable shipment of oleo which cost him over twice that. Another dealer recently auctioned off 75 cases of left-over Dutch oleo at 14 cents Mexican. The Germans to some extent offer a mixture of butter and oleo on the local market without marks. The local laws and ordinances compel marking of butter substitutes, but they are not enforced.

The Chinese bakers may learn to use oleo, but they have long used oils from nuts. It is well known that the Chinese as a people do learn to use new food products, and butter and its substitutes may be observed to make some headway. Generally speaking, rice is their bread. The Russians in Vladivostok furnish some market for oleo. There is also an occasional call for it from the neighboring community of Macao (Portuguese), 40 miles away. [Addresses of butter importers and dealers at Hongkong are furnished by Mr. Wilder, and are filed at the Bureau of Manufactures.]

VARIOUS PRODUCTS.**ALMOND CROP OF MALAGA.****PRICES AND FLUCTUATIONS—OPPOSITION TO LOCAL TRUST.**

Consul D. R. Birch writes from Malaga that several features of interest to American buyers have developed in the Malaga almond season, which opened the last of August.

Late in July it was feared that the Jordan trees would yield perhaps less than half of last year's crop, but the indications are now that a greater percentage will be available for exportation, or roughly estimated about 50,000 25-pound boxes. The preponderance of large fruit is greater than for many years, the smaller sizes desired by American houses being about 40 per cent of the crop.

One-fifth of the Jordan production has been marketed to local exporters at an average price which started at \$7, but soon reached \$7.85 the arroba (25 pounds). These almonds are brought from the growing districts in bags of 200 pounds each, and contains jordan of all sizes and grades from which the local merchants make their classification. The price paid by the latter fluctuates to the extent of about \$1 an arroba, according to the proportion of larger almonds in a given lot.

Now the average price is \$7.25 the arroba, and the growers are said to be holding out for better figures. This price is from \$1 to \$1.50 more than the growers secured for their almonds in 1905. Selling prices are much higher than last year. The short crop, which increases first-cost figures, and the appreciation of Spanish money may be held chiefly responsible. Small almonds of the size popular with American confectioners sell at \$8.40 the 25-pound box against \$6 last year. Sales to the United States up to the present show a slight decrease from those of last season.

"Valencias" are reported to be fewer, but plentiful. The local almond "trust," at the outset of its second season, finds more vigorous opposition from independent shippers, one of whom made an early attempt to control the market.

HIGHER RAISIN PRICES.**SPANISH MUSCATEL CROP PARTLY DESTROYED BY STORM.**

Consul Birch also reports that one-third of the muscatel raisin crop in that part of Spain was destroyed in September by a violent rain and wind storm, amounting to almost a cloud-burst, which raged for ten hours.

The storm was particularly untimely, as the bulk of the grapes were still on the vines and approaching the highest stage of perfection. In the district of Campanillas, adjacent to Malaga, where the largest raisins are secured, but a small proportion of the grapes had been cut and placed upon the drying beds, with the result that the bulk of the fruit in that section has been either wholly lost or badly damaged.

The tempest was almost unprecedented in its severity, one river which flows through the grape district overflowing its bank and submerging thousands of vines filled with ripening grapes. Prior to the

storm the extent of the raisin crop had been estimated at 900,000 22-pound boxes.

First-cost prices have already advanced one-half a Spanish dollar per box of 22 pounds, the prices now paid by local exporters to the growers for the various grades being 22½ pesetas for imperials, 17½ for royals, 15 for desserts, 10½ for connoisseurs, 9 for cabinets, 8 for London layers, and 5½ for seedless. There is no stock of loose 5 crowns, but 4 crowns are quoted at 10 pesetas, 3 crowns at 8½, and 2 crowns at 6. The peseta is now worth about 17 cents American.

An inevitable rise in the selling price of the raisins will follow, a condition that will considerably affect the American market. Generally it happens that as the season progresses prices become lower, but exporters say that contrary conditions will prevail this year, and that mid-season figures may be slightly in excess of those at present.

CORRECTING MUSTY WINES.

COFFEE GROUNDS SUCCESSFULLY USED AS THE PURIFIER.

Vice-Consul Charles Karminski furnishes the translation of a Seville newspaper article as to a new process of how to correct musty wines, which follows:

Mr. Crouzet, a French savant in pharmacy, has successfully demonstrated how wines may be rid of mustiness by means of coffee grounds. In consequence of either an abundant crop or negligence, must is sometimes garnered in ill-conditioned receptacles, which impart to it an unsavory flavor, due to the formation of mold, which in turn secretes an essential oil, known in chemistry as ethereal aldehyde. This oil, in the form of minute droplets, clings to the filaments or spores of the mold and is soluble in alcoholic liquors, which thus assimilate the unpleasant flavor which the oil inherently possesses. It is precisely this defect which Mr. Crouzet's efforts encompass, and his process is all the more interesting since the old ways of treating musty wines, whether by means of olive oil, pulverized mustard, or carbonized nuts, were not all of an assured efficacy.

The treatment consists in admixing to each hectoliter (26.42 gallons) of moldy wine 250 grams (8.818 ounces) of coffee grounds and 5 grams (3.125 pennyweights) of pulverized orris (iris florentina), shaking the mixture thoroughly for an hour and then leaving it four or five days undisturbed, allowing the sediment to settle and cure the wine of its cardinal defect. During the initial tests of the new process the deodorizing properties of coffee grounds, strongly asserting themselves in their successful employ in pharmacy for cleansing mortars, were not lost sight of by the inventor, and it is mainly to this observation, trivial at first thought, that the valuable discovery is due.

DRIED MILK OF PAWPAW.

An important drug product of the Montserrat district of Spain is the dried milk of the pawpaw fruit. The peasants have lately developed this as an industry, the exports of which have steadily increased since 1900. The milky juice (latex) which exudes from the fruit when the skin is scored is collected and sold to dealers, even being carried for miles to market. The revenue probably constitutes the largest direct form of monetary payment reaching the peasantry during the

past two or three years. The pawpaw grows freely in many American States, but has not yet been made to render any commercial tribute.

PORTUGAL.

OPENINGS NEEDED FOR THE KINGDOM'S PRODUCTS.

Chargé d'Affaires Henry P. Fletcher, at Lisbon, reports on Portuguese wine, sardines, and wheat topics as follows:

The sardine trade, one of the most important industries of Portugal, is seriously threatened by the imposition by France of a tariff duty of 50 francs per 100 kilos (\$9.65 per 220.46 pounds) on this article. This duty is almost prohibitive, and practically closes the French market to the Portuguese product. In the eight years 1896-1903, the latest statistics available, the value produced in Portugal amounted to about \$14,387,735, the amount for 1903 having been \$1,799,229.

The exports of Portuguese wines for 1905 were as follows: Common red wines, \$3,812,631; common white wines, \$667,540; various liqueur wines, \$132,507; port wine, \$5,027,431; madeira, \$829,274.

Portuguese wines of all kinds were sold mainly to the following countries in 1904: Brazil, \$3,718,000; England, \$2,777,000; Germany, \$450,000; Russia, \$286,000; France, Holland, Denmark, and Belgium, each less than \$200,000; while Norway, Sweden, and Argentina each bought more than did the United States, whose \$21,000 purchases in 1904 were less than half those of the previous year.

The Portuguese Government is trying to make commercial arrangements with most of the above-mentioned countries with a view to securing most favored nation treatment for Portuguese products, especially wine. In most of the countries mentioned, Portuguese wines are at present subject to the general or maximum tariff, while Spanish and other competing wines enjoy differential treatment.

A large Portuguese wheat crop is reported, and foreign wheat, which was imported in large quantities last year, will not likely find a market in Portugal this year.

OLIVES SAVE CRETE.

ABUNDANT CROP SUSTAINS COMMERCE FROM SLUMP.

A report on the trade of the island of Crete in 1905 by a British representative indicates that insurrectionary troubles exercised a baneful influence on the economic situation during that period.

The imports showed an increase of \$280,967, from \$2,674,944 to \$2,955,911, but this movement was in a large measure due to the fact that considerable quantities of agricultural products had to be imported to make up the shortage caused by the unsettled condition of the island. The disturbances injured the export trade, which would have been worse but for the restoration of order prior to the olive crop being gathered. As it was there was an increase in exports of \$142,753, from \$2,042,178 to \$2,184,940, the improvement being entirely due to the excellence of the olive crop. The exports of olives showed an increase of \$265,263, but shipments of other agricultural products fell by \$55,618.

UNITED STATES RICE CROP.

Mr. William A. Grant, local manager in Houston, Tex., of the Merchants and Planters' Warehousing Company, in speaking of the rice crop, said:

"The acreage this year will exceed that of last year by at least 20 per cent. The yield per acre, so far, has proven considerably in excess of last year's yield. The crop this year will certainly range between 4,000,000 and 4,500,000 bags. No rice was carried over this season from last year, thereby giving an absolutely clean market to begin with. There is no reason why good values should not be maintained throughout the country."

The first rice sold at Houston this year was sold under competitive bidding last week and realized \$3.70 per barrel f. o. b. the farm.

AFRICAN PEANUT CROP.

Vice-Consul P. H. Cram, of Marseille, writes, in reply to an inquiry regarding the growing crop of peanuts in Africa, that the season is not yet sufficiently advanced to give any useful information. The crop was sown in July and in the early part of August, under favorable circumstances. It is reported that the recent heavy rains in Senegal may have caused some damage to the crop, although as yet nothing has been confirmed. The present ruling prices are: 28 francs per 100 kilos. (\$5.40 per 220 pounds) for Rufisque (Senegal) peanuts and 27 francs per 100 kilos. (\$5.21 per 220 pounds) for Gambian peanuts, delivered ex quay at Marseille.

VANILLA INDUSTRY IN THE SEYCHELLES.

The annual report of the British colony of Seychelles, which has recently been issued, represents the population as in very bad condition, owing to the collapse of the vanilla industry. A few years ago 75 per cent of the total exports from the island were of vanilla. In 1904 a severe drought destroyed one-third of the vines and subsequent dry weather so damaged the flowering of the plants which escaped that during the present year there has been no crop at all. The cultivation of cocoanut products is gradually taking the place of the rearing of vanilla vines, and for the first time these products occupied first place among the exports in 1905.

FRUIT INDUSTRY.

GROWTH OF AMERICAN TRADE.

EXPORTS NOT DEPENDENT UPON TARIFF RATES.

CLASSES OF FRUITS EXPORTED—SHIPMENTS TO MANY COUNTRIES.

In connection with the pending commercial convention between the United States and Germany intimations are given from time to time that a tariff war would seriously disturb some branches of our commerce with that country and totally ruin others. Our large trade in breadstuffs and provisions were given prominence in the predictions of commercial disaster, and now warnings are apparent in some of the leading newspapers that the growing exports of fruits are in danger, based on the fact that the temporary agreement under which minimum rates of duty are extended to American fruits "may be at any time destroyed."

Those having knowledge of the character, conditions, and extent of the trade between the two countries can not be alarmed by exaggerated utterances regarding disasters that would follow sudden abrogation of the *modus vivendi*. Even though Germany's commercial interests would not thereby be affected, the people and the Government of that country are too sincerely friendly toward the people and Government of the United States to doubt that every effort will be made by the President to secure equitable and satisfactory adjustment of every point in contention.

VALUE AND EXTENT OF EXPORTS.

In connection with these doubts and misgivings facts and figures covering the fruit trade of the United States will prove interesting to those engaged in that industry and informative to those who imagine this progressive trade is dependent upon discriminating tariff rates. The total exports of fruits for the year ended June 30, 1906, were \$14,857,272. For the year 1904 the value was \$20,348,299, and for 1905, \$15,297,391. The decrease in 1906 compared with 1905 occurred nearly wholly in the export to Germany. For this reason Germany stands third in the order of countries to which shipments were made in 1906, instead of second, as in the preceding year. The order of exports in 1906 brings Canada second to the United Kingdom. The detailed report of exports for 1906 is not available, and therefore that for

1905 is given below to show the value of the fruit trade and the principal countries to which it is sent:

Country.	Quantity.	Value.
Apples, green or ripe:	<i>Barrels.</i>	
United Kingdom.....	1,250,118	\$3,211,647
Germany.....	165,903	404,322
Dominion of Canada.....	21,840	62,891
Mexico.....	12,278	44,249
Cuba.....	11,505	33,681
Australasia.....	7,770	17,860
China and Hongkong.....	6,099	17,712
Brazil.....	5,596	14,413
Netherlands.....	2,624	6,590
All other countries.....	16,209	46,010
Total.....	1,499,942	3,859,375
Apples, dried:	<i>Pounds.</i>	
Germany.....	19,370,069	1,055,976
Netherlands.....	10,813,372	593,963
Belgium.....	3,331,533	231,836
United Kingdom.....	1,858,366	100,550
Denmark.....	1,039,450	54,434
Sweden.....	922,200	51,339
France.....	539,323	26,477
Norway.....	324,017	18,769
All other countries.....	1,074,560	75,070
Total.....	39,272,890	2,208,414
Apricots, dried:		
Germany.....	1,733,406	160,019
Netherlands.....	1,193,250	103,127
United Kingdom.....	1,036,049	88,843
France.....	883,655	73,405
Dominion of Canada.....	535,220	44,473
Belgium.....	538,525	42,879
Denmark.....	231,425	18,840
British South Africa.....	142,973	17,312
Australasia.....	166,255	15,582
All other countries.....	393,396	37,297
Total.....	6,854,154	606,777
Oranges:		
Dominion of Canada.....		801,041
United Kingdom.....		76,311
Australasia.....		38,212
Mexico.....		3,417
Bermuda.....		2,504
Germany.....		604
All other countries.....		7,062
Total.....		929,151
Prunes:		
Germany.....	20,951,321	826,135
Netherlands.....	9,821,963	575,935
United Kingdom.....	11,094,549	485,835
Dominion of Canada.....	5,229,545	176,050
Denmark.....	2,352,640	120,130
Belgium.....	1,454,960	73,626
Sweden and Norway.....	1,320,994	71,731
France.....	432,110	22,030
British Australasia.....	615,874	21,774
Mexico.....	565,967	17,965
All other countries.....	1,153,926	63,845
Total.....	54,993,849	2,455,056
Raisins:		
Dominion of Canada.....	4,225,532	200,824
British Australasia.....	957,290	54,650
Mexico.....	442,478	25,344
Germany.....	418,378	28,214
Denmark.....	254,050	20,226
Sweden.....	124,550	7,543
United Kingdom.....	87,100	6,843
All other countries.....	545,446	33,943
Total.....	7,054,824	372,087

Country.	Quantity.	Value.
All other green or ripe fruit:		
Dominion of Canada.....		\$981,453
United Kingdom.....		454,337
Germany.....		309,466
Netherlands.....		161,243
Mexico.....		86,274
France.....		51,424
Cuba.....		50,277
Belgium.....		49,676
British Australasia.....		30,238
All other countries.....		129,250
Total.....		2,253,638
PRESERVED FRUIT.		
Canned:		
United Kingdom.....		2,058,500
British Australasia.....		100,362
British South Africa.....		42,532
Dominion of Canada.....		40,319
China.....		32,772
Germany.....		31,948
Cuba.....		28,510
Dutch East India.....		25,684
All other countries.....		180,408
Total.....		2,541,025
All other preserved fruit:		
Dominion of Canada.....		14,249
United Kingdom.....		14,141
Belgium.....		6,187
Germany.....		3,705
All other countries.....		33,586
Total.....		71,868

RECAPITULATION BY PRINCIPAL COUNTRIES.

Countries.	1905.	1906.
United Kingdom.....	\$6,496,512	\$5,867,500
Germany.....	2,815,419	2,543,900
Dominion of Canada.....	2,275,904	2,819,700
Netherlands.....	1,451,833	947,400
Belgium.....	413,970	594,000
British Australasia.....	289,563	341,300
Denmark.....	220,326	
Mexico.....	196,301	228,400
France.....	183,183	607,400
Cuba.....	129,870	189,700
Sweden and Norway.....	165,563	
China and Hongkong.....	86,518	130,000
British South Africa.....	122,750	144,000
Brazil.....	33,539	34,100
Dutch India.....	28,239	
All other countries.....	388,301	826,858
Total.....	15,297,891	a 15,274,158

^a Less value of nuts (\$416,886); leaving the net exports of fruits \$14,857,272.

CLASSES OF FRUITS EXPORTED.

In the matter of green apples it will be seen by the foregoing statement that Germany is our second best customer, purchasing one-eighth the amount of apples purchased by the United Kingdom. Germany leads in dried apples and apricots, purchasing \$1,055,976 and \$160,019 of these, respectively. Attention is specially called to these purchases for the reason that dried apples and dried apricots are imported into Germany, not for immediate consumption, but for manufacture in Ger-

many. In Special Consular Reports, "Foreign Markets for American Fruits," published in 1904, our consuls explain this manufacture. The consul at Dusseldorf reported for his district:

An important article of importation into this district is the waste coming from the manufacture of apple rings (the cores and skins of the apples), used largely in the manufacture of a jelly, which is a favorite dish, forming part of the breakfast table in Rhenish and Westphalian families, being used like butter on bread. The domestic fruit growers of this country being unable to fill the demand of about one hundred marmalade and jelly manufacturers, among which are considerable concerns, for this waste product, there are imported annually about 55,000 barrels of skins and cores. The average weight of a barrel is about 254 pounds, making a total of 13,970,000 pounds, valued at about \$250,000.

It would therefore follow that a suspension of any agreement which would interfere with this part of our fruit trade would also interfere with a very important German industry.

Prunes and other green fruit compose nearly the whole of the balance of our fruit trade with Germany. Thus it will be seen that this fruit trade is fully as important to Germany as it is to us and that if Germany should—a thing highly improbable—do anything to deprive its people of American fruit the loss could not be very well made up from any other quarter without a large additional expense.

In the general interchange trade between the United States and Germany everything we send her is necessary to her consumption—food for her people and "food" for her factories—while three-fourths of our purchases from Germany are composed of advanced manufactures—manufactures which we could purchase equally as well in other European countries without much inconvenience in the changed connection.

SHIPMENTS TO GREAT BRITAIN.

Of our total exports to the United Kingdom (\$6,496,507) in 1905, it is to be noted that raw apples and canned fruit—\$3,211,647 and \$2,058,500 = \$5,270,147—compose nearly the whole trade. It would thus appear as if the British people desired fruit which could be directly consumed without any cooking manipulation. It looks as if they were too busy to cook their fruit or unaware of the possibilities of fruit cookery, otherwise they would consume many million dollars' worth of our dried apples if they knew how to prepare them for consumption as they are prepared and consumed by the American people.

When it is considered that the United Kingdom imported the classes of fruit in 1905 given in the following statement and then consider the insignificant amounts of the greater number of classes imported from the United States it may be concluded that our fruit growers and exporters have not worked the British market to any great degree, being, seemingly, content to supply the British demand for such fruit as it can not secure elsewhere—green and canned. If the fruit markets of the United Kingdom were properly exploited our fruit growers could easily increase their trade in dried apples, oranges, prunes, raisins, and other fresh fruits by at least \$2,000,000 per annum. With a people so fond of fruits, jains, and jellies there is no market more promising for increased trade than that of the United Kingdom. The following statement of imports into the United Kingdom in 1905 will show our fruiterers the vastness of the fruit consumption of the United Kingdom and our very small contribution to that consumption.

Description of fruit.	Total.	From United States.
Nondutiable:		
Apples, raw.....	\$10,050,300	\$4,559,400
Apricots and peaches, raw.....	253,100	7,800
Bananas, raw.....	8,615,300	
Cherries, raw.....	1,231,200	
Grapes, raw.....	3,706,400	
Lemons, limes, and citrons.....	2,039,000	
Oranges.....	9,487,200	122,100
Pears, raw.....	1,984,600	459,000
Plums, raw.....	2,553,500	74,500
All other raw.....	1,976,800	21,400
Total raw fruit.....	41,897,400	5,244,200
Dried dates.....	1,263,000	
Unenumerated dried.....	135,300	103,200
Fruit preserved without sugar—		
Canned or bottled.....	722,800	207,800
Other than canned or bottled.....	888,500	
Fruit juice.....	363,100	8,500
Total nondutiable.....	46,270,100	5,558,700
Dutiable:		
Currants, dried or otherwise preserved without sugar.....	4,500,400	
Figs and fig cake.....	1,005,400	
Plums, dried or preserved.....	1,113,000	430,900
Prunes, dried or otherwise preserved without sugar.....	201,600	118,700
Raisins.....	4,739,000	2,500
Fruit, canned or bottled, other than preserved in thin sirup.....	2,945,700	1,932,600
Fruit, canned or bottled, preserved in thick sirup.....	10,300	2,000
All other fruits liable to duty.....	336,800	7,800
Total dutiable.....	14,852,200	2,544,500
Total imports.....	60,122,300	8,103,200

The foregoing statement shows conclusively that our fruit growers and exporters do not supply the British market with anything like what they should supply it with proper exploitation. There are some classes of fruit wherein we can not hope at present to share, but deducting all such and green apples, wherein we have a fair trade, the United Kingdom imported in 1905 fruit to the value of \$35,000,000, wherein we only participated to the amount of \$1,600,000.

In the apple trade of the United Kingdom our only serious competitors are Canada and Australasia (Tasmania), viz: Imported in 1905 from Canada, \$3,426,400; from Australasia, \$1,126,600; from the United States, \$4,559,400; from all other countries, \$937,900; total imports, \$10,050,300.

BELGIUM AND THE NETHERLANDS.

In this connection our exports of fruit to the Netherlands and Belgium, as compared with our exports to Germany in 1905, is interesting as showing the relative value of our fruit trade with the three countries. Our exports to the Netherlands, if we take the populations of both countries into consideration, are very much greater than our exports to Germany. The exports of fruits from the United States to Germany, Netherlands, and Belgium in 1905, green apples omitted, was as follows:

Description.	Germany.	Netherlands.	Belgium.
Dried apples.....	\$1,055,976	\$593,963	\$231,836
Apricots, dried.....	160,019	108,127	42,879
Prunes.....	826,185	575,935	76,627
Raisins.....	23,214		
All other green fruit.....	309,466	161,243	49,676
Canned fruit.....	31,948	4,865	4,781
Other preserved fruit.....	4,310	1,100	10,715
Total.....	2,411,068	1,445,233	416,514

A glance at the statement covering our fruit exports in 1905 shows that the trade is not wholly confined to Europe, but that it is widely distributed, though not to a very large degree, throughout nearly all countries. The exports to the following countries are especially significant as indicative of what can be done if our exporters were not so wholly concerned with their European trade as to ignore other countries: The Dominion of Canada, Australasia, Mexico, Cuba, China, British South Africa, Brazil, Dutch India, etc. If our fruit trade were developed to its reasonable possibilities in all countries, our growers would not be much inconvenienced by disarrangements through tariff wars or other causes which would shut them out wholly or partially from any single market, leaving out of view the general enlargement of trade through "diversified" markets.

MARKETS IN FRANCE.

BETTER PACKING WOULD HELP TO EXTEND THE TRADE.

Consul John C. Covert, of Lyons, calls attention to conditions in the European fruit market, emphasizing the fact that the situation in France and England is favorable to America. He writes:

The *Journal d'Agriculture*, an organ of the agricultural interests of France, recently contained an article on the increasing importance of fruit culture in France and the danger from American competition. It set forth that it was imperatively necessary to find new markets for the increased production, unless the dealers were prepared to accept very low prices for their surplus products. I translate a part of the article:

It is especially necessary to take steps to meet the growing American competition which is developing in England. The Americans, whose enterprising genius is well known, have planted vast fruit farms and are now striving to unload their surplus in Europe, especially in England. For a number of years the market had been largely supplied from France and the importations from other countries were of secondary importance. Now that is entirely changed. Last autumn the price of pears fell suddenly over one-third from very satisfactory figures. This was due to importations from America. We hear of frequent importations of American apples into Germany and also into France. All last winter and along into the month of April the central market stores in Paris were inundated with apples from Canada and the United States. Much of this fruit, it is true, was decidedly of a secondary character, while some of it was good, especially for cooking. If not to be compared to our choicest apples, our fruit de luxe, such as the Calvilles, Canada renettes, and other apples produced in the neighborhood of Paris, the same is not true in regard to the fruit sent from our provinces to Paris.

It seems absolutely beyond question that American competition is destined to grow and to become more active, especially in the English market, where the transportation from the United States is easy. We ought to make every effort possible to hold and to increase our trade in the English market.

The fruit growers of France, especially the apple growers, have no apprehension of competition from the United States or Canada this year. Last year, when the apple crop of France was poor, the market here was invaded with fruit from Canada and the United States. I am told that this year the crop is exceptionally large in France and Italy.

WISE WORDS FROM AN EXPERT.

A large fruit dealer in Lyons told me that the packing of American apples is not all that could be desired for the French market. He thinks the method of packing would be greatly improved, for so long

a voyage, if rectangular boxes were used instead of barrels, with three layers of apples, sheets of paper between each layer, and heavy paper at the sides and ends of the boxes—the fruit to run about sixty pounds to the box. When packed in barrels, he says, the fruit is bruised by contact with the different layers of apples, the fruit in the lower layers supporting a heavy weight during the long voyage. I suppose this hint is as valuable to shippers sending apples to England as it is to those shipping to France. Americans might adopt the box method of packing, thus preserving their fruit and having a system that, in the course of time, would be distinctively American.

PROPOSED COOPERATIVE FRUIT COMPANY.

In this connection I add a suggestion recently made by Monsieur Durand, a distinguished authority on horticulture and the director of the Ecole Pratique de Horticulture and Agriculture on the outskirts of Lyons. He proposes that all the fruit growers in this section of France organize a cooperative company for the sale of their products; that all their fruit be collected in one place and examined; the best selected and packed and forwarded to the desired market, the proceeds of the sales being divided among the producers according to the quantity contributed by each one. Such a plan, he says, would give to each producer results far superior to his present receipts. In periods of poor crops the fruit would be placed upon the market in time to profit by the highest prices. In a year when fruit is so plentiful as to make the prices ruinously low the company would forward the fruit in small quantities, instead of glutting the market and reducing the prices below the cost of packing, freight, etc.

Mr. Durand referred to several seasons when wine was so abundant that the prices were below the cost of making it and barreling it for the market; and he thinks that fruit growers should now provide against such a contingency in the matter of fruit. He remarked that the Paris, Lyons and Mediterranean Railroad Company receive from one and a half to two million dollars annually on fruit freights; and he thought the company would provide improved facilities for transporting fruit, such as refrigerator cars, and afford reduced rates if the combined fruit interests of the country were to ask for them. There are already in France thirty-nine societies for the sale of general farm products, but Mr. Durand proposes one that will deal exclusively with fruit for export. He mentions as the principal fruits exported from France cherries, apricots, peaches, pears, apples, strawberries, raspberries, currants, and cassis.

ENGLISH MARKETS.

CAREFUL GRADING OF APPLES ESSENTIAL TO SUCCESS.

Consul Walter C. Hainm writes from Hull that reports as to the fruit crop in England show varying conditions in different localities.

In some parts, especially in southern England, the yield is plentiful, while in the northern part it is said that apples, pears, and plums are a failure. In the neighborhood of which Hull is the center enough apples for local consumption are not grown, even in good years, and the market has to be supplied largely from abroad. This gives American exporters an excellent opportunity to market their surplus product. But there are rivals in the field.

Canada is making earnest efforts to get control of the fruit market in this country, and it is necessary to impress upon American exporters again that the Canadian government is aiding the movement to its best ability. It has made very strict regulations for the grading of all apples shipped, and has imposed heavy fines on violations of these rules.

For instance, a Canadian barrel branded "Fancy," which is a new grade, is required to contain sound, well-grown fruit of one variety, with all imperfect, small, and marked fruit carefully eliminated. "No. 1" grade consists of 90 per cent perfect fruit, and "No. 2" grade must have 80 per cent of fruit free from defects that cause material waste. The success which has so far attended the effort of the Canadian government in this line has encouraged it to make the regulations still more strict in respect to the picking of fruit and the penalties still more severe for the shipment of barrels graded wrongly. Now it is believed that only apples properly graded are received in England from Canada.

If the American farmers expect to retain the hold they have on the English market they will have to be as careful in grading their apples as are the Canadians, otherwise they will soon lose their market in this country. They have lost a part of it already by bad grading, and the same defective methods will lose them more of it.

England consumes a large amount of fruit, and the quantity is constantly growing as the public becomes educated to it. There are few fruit farmers in Britain as compared with this class of farmer in America and Canada. There has been no such scientific culture of apples here as has been conducted in some other countries. As a consequence, there are few or no large orchards, most of the fruit being grown on small, scattered patches of land. The following table shows the quantity of apples and their value imported into England during several recent years from Canada and from the United States. The quantity has varied largely according to the home fruit crop:

	1901.		1903.		1905.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
United States	726,366	\$2,439,220	2,381,619	\$7,100,560	1,631,819	\$4,684,065
Canada	474,712	1,527,765	1,545,455	4,396,945	1,247,766	3,519,730

It is reported that a steamship service for the exportation of American apples exclusively is about to be established between Boston, London and Hull, the vessels sailing semimonthly and having a capacity of 20,000 barrels each. If such a service is established it will give the American apple growers an excellent opportunity to place their product on the market here. There is a demand for the fruit, but the producers must remember that only the honestly graded article will pass and that they must meet keen competition from both Canada and Australia.

LEATHER TRADE.

BOOTS, SHOES, AND HIDES.

GREAT BRITAIN AMERICA'S GREATEST MARKET.

HEMLOCK-TANNED IN GREATEST DEMAND—CHARGES OF ADULTERATION.

The importance of the leather industry to the United States is manifest by the immense production of the country, for which an export outlet is plainly desirable. Sales abroad are making considerable progress, the total amount for the fiscal year ending June 30, 1906—\$40,642,858—being nearly \$7,000,000 in excess of two years previous. The value of the American leather industry has led Special Agent Arthur B. Butman to pursue investigations into the British markets, by far our most important in practically all lines of leather goods except boots and shoes. Even in footwear the United Kingdom takes nearly \$2,000,000 worth of American goods per annum. Mr. Butman submits the serious English complaints about the adulteration of American leather, a summary of which was published in the Daily Consular and Trade Reports for May 26, and which seem supported by laboratory tests.

The leather exports from the United States to Great Britain for the fiscal year 1904 showed a very satisfactory trade. In 1905, however, America lost ground, especially in sole leather, which is attributable in part, at least, to the large amount required for home consumption. There was some recovery, however, in 1906. The following are the figures:

	Total.			To United Kingdom.		
	1904.	1905.	1906.	1904.	1905.	1906.
Sole leather.....	\$6,978,497	\$9,444,873	\$8,186,279	\$5,611,423	\$4,449,410	\$5,956,092
Upper leather:						
Glazed kid.....	1,512,179	1,576,204	1,922,430	11,345,111	11,072,078	11,274,750
Patent.....	170,940	166,320	143,590			
Splits, buff, grain, etc.....	15,049,602	15,067,791	17,242,011			
All others.....	1,140,364	1,813,154	1,822,537			
Boots and shoes.....	7,238,940	8,067,697	9,142,748	1,868,894	1,943,845	1,862,747
Harness and saddles.....	560,346	502,660	691,575	15,112	10,647	.....
All other.....	1,329,747	1,318,046	1,491,688	176,296	210,061	.....
Total.....	33,980,615	37,936,745	40,642,858	19,016,836	17,686,041	19,093,589

The leather situation in England is discussed by Mr. Butman in the following letter from London:

The American hemlock-tanned sole leather is in greater demand than the oak-tanned leather, owing to the difference in price; the hemlock at present writing selling for the side 28½ to 30 cents per pound,

and for bends 30 to 35 cents per pound. The oak-tanned sole leather sells at the present writing for the side at 36 cents per pound, and for No. 1 backs 42 to 45 cents per pound; No. 2, 40 to 43 cents per pound; No. 3, 38 to 40 cents per pound. I am informed that the average-grade British product sells for a few cents less per pound, but for the higher grades of shoes the American leathers are in demand, as they can be worked to better advantage. The British manufacturer considers the American hemlock-tanned leather the best all-round sole leather that can be secured.

The statistics of the British Board of Trade show a large increase for the past three years in the leather imports from Germany, the Netherlands, and Belgium. This is food for reflection. I am told, however, by one of the largest tanners and importers of leather in London that the United States could always find a ready market in Great Britain for sole leather, providing the exporter would ship promptly at weight required, and an unadulterated product.

ADULTERATION CHARGES—UPPER LEATHERS.

The British importer maintains that at present a large quantity of American sole leather is being adulterated to the detriment of the trade. The same assertion is said to have been true regarding the Australian tanned leather a few years ago, in consequence of which the Australian exporter lost to a large extent, at least, his British market, which market he finds it difficult to regain. The report of the English committee appointed to analyze samples of American sole leather shows to the United States tanner the harm which may come to his export trade.

There is a good demand for American upper leathers in this country, particularly for box calf, glazed kid, satins, and splits, of weights required for British consumption. The box calf and glazed kid are extensively used in the manufacture of the better grade of English shoes; the satins and splits in the cheaper grades. There is a great demand for chrome and other colored leather; in fact, I am informed by the leather merchants that it is very difficult to obtain a supply of colored leathers from the United States sufficient to satisfy the demand of British manufacturers, and, consequently, the Britisher is compelled to import from Germany and France. If the American tanner wishes to increase his export trade he should furnish the product required in the foreign market and not, as seems often the case, assume that a product demanded for home consumption will be equally salable to the foreign buyers. The German and French tanners manufacture the article as required, and I understand are also very prompt in filling orders and particulars as to details. In matter of price all upper leathers average about the same as in the United States, depending, of course, on the fluctuations of the market.

The ocean transportation service between the United States and England must be already so well known as to make any number of minute details concerning the same unnecessary; suffice it to say that steamships of the various lines are leaving the United States ports at such frequent intervals as to enable any exporter to avail himself of an almost daily service. The following rates are at present quoted on rough and finished leathers in bales and cases from Boston and New York to London, the same rates applying from either port: Leather

(rough), \$5.25 and 5 per cent per 2,240 pounds; leather (finished) in bales, \$8.50 and 5 per cent per 2,240 pounds; leather (finished) in cases, \$3.60 and 5 per cent per 40 cubic feet. The rate for dock charges per ton is 35 cents, and from dock to warehouse per ton \$2.25. Possibly better rates might be obtained by the exporter if large and frequent shipments were made.

ARTICLES FOR EUROPE.

MORE AMERICAN FOOTWEAR NEEDED IN AUSTRIA.

Consul-General W. A. Rublee believes that American shoe manufacturers should be able to enlarge their business in Austria very considerably. He writes from Vienna:

American shoes have become popular during the last two or three years in this country, and the opportunity to extend trade in this line is certainly inviting. Up to the present time there is practically but one firm in Austria doing business in American shoes on a fairly large scale. This firm opened a store in Vienna during the winter of 1903-4 for the sale of American shoes exclusively, having been encouraged by experimental sales of the American article in connection with Austrian shoes. In the two and one-half years that the store has been established the sales, which were satisfactory even in the beginning, have increased by about 200 per cent. The firm already has branches in one or two other Austrian cities, and is about to open a large store in Prague, while another branch is to be established in Lemberg during the coming winter.

The success that has attended the first systematic effort to put American shoes on the Austrian market is significant of the possibilities of the future development of this trade. Outside of the business done by this one firm there are a few other dealers who, in some cases, handle genuine American shoes in a small way. Then there are Austrian shoemakers who imitate American shoes and stamp them with well-known American labels. The field is, however, but little occupied, the one firm doing the principal business handling only two or three American makes.

HIGH REPUTATION OF AMERICAN GOODS.

The opportunity, therefore, presents itself to some of the large American manufacturers to enter a promising field by looking into the present conditions of the shoe trade in Austria. The Austrians like American shoes because they wear better, are more comfortable, and more stylish than those of Austrian make. They buy mainly a medium-grade shoe, such as sell in America at about \$3.50 per pair. Shoes of this grade are selling in Vienna at retail now for 23 crowns (\$4.60) per pair.

The duty and freight on a pair of shoes from America figures out at about 30 cents, so that there is a handsome profit in the business at present prices.

Shoe manufacturers entering the Austrian market should be careful to give a good quality, as it is necessary for the successful sale of American shoes that they should be superior to the home product. In the beginning also it is advisable to advertise liberally. The results

already accomplished by the shoes that have been introduced indicate, however, that there is a market that is far from having been fully exploited as yet. Austria is far too much neglected not only by American shoe manufacturers, but by manufacturers of many other articles. The market should yield good returns if it were given as much attention as is devoted to some other European countries.

MARKETS IN FRANCE.

AMERICAN PRODUCTS HIGHLY REGARDED—DIRECT TRADE NEEDED.

Vice-Consul A. Piatti reports that American shoes first made their appearance on the market at Nice some six years ago. He writes:

The models then shown were so absolutely different from anything sold in the shops or made by the local bootmakers that they seemed destined to score a failure. But ere long it was noticed that the signs "American shoes" and "American style" multiplied very rapidly, and a cursory investigation demonstrated the fact that not more than one-fourth of the so-called American shoes ever came from America. The shapes had been roughly imitated, but every other excellent feature of the product of the United States was missing. In some cases the very awkward imitations bore such imaginary marks as "Boston," "Real American," etc., but it must be said without ever deceiving even the most inexperienced of American buyers. When hard pressed the sellers acknowledged that the shoes were not of American manufacture, and added that they were made on American lasts and were quite the same as the genuine article—which they were not, by any means.

The more expensive only of our shoes have found their way on this market, and the result of this has been most gratifying to the imitative manufacturer here, for the reason that by giving to his article some semblance of the American shoe sold at \$5, \$6, and \$7, he sold at \$3 and \$4 an article that he had previously been accustomed to sell at \$2 and \$3. It is to be regretted that the cheaper grades of our shoes were not introduced at once, for they would, in view of their excellence and cheapness, have completely blocked the way to both imitation and competition.

That the trade is increasing is beyond all doubt, but, as in the case of nearly every American article sold here, the development of the export movement is retarded by the fact that the trade is done indirectly. It will readily be understood that shoes reaching this market through second or third hands, and sent by rail over long distances, are not in a favorable situation to compete in a region where, after all, successful competition is a matter of price. I do not see why any other than the ports of southern France, with their direct communication with New York, should serve as distributive centers for all this region.

SUPERIORITY OF AMERICAN LEATHERS.

There are in this consular district not less than 250 custom bootmakers, all of whom use more or less of some grade or other of American leather, and, strange to say, without knowing it. In the course of one of my investigations I was greatly amused on being shown a

hide marked "Newark, N. J.," and with the name of a well-known manufacturer, and being told that it had been furnished him by a traveling salesman as being of Belgian manufacture. I have also seen leathers of the finer grades of American manufacture which had been sold by salesmen from Paris and Hamburg. It is evident that merchandise following such roundabout channels must of necessity be very considerably enhanced in cost and find its margin of competition greatly reduced.

As to the quality of the American leathers used the opinion of consumers is unanimous—i. e., that they are absolutely unsurpassed, and that in many cases they have never been equaled. In one case a buyer complained bitterly of the system in measuring the hides and skins, and he stated that it resulted in the goods costing more than he had bargained for. This led me to suspect that the system was probably prompted by the necessity of increasing the quantity in measuring in order to increase the margin of price for competing. It was evident that in this case the goods were being resold, and therefore nothing could be said. "Besides," as the purchaser said, "I must have this quality and I can not find it anywhere else." The custom bootmakers use a considerable quantity of the finer grades of American leathers, and this trade would be greatly augmented if it were done more direct.

FOOT GEAR FOR INDIA.

ENGLAND LEADS—OPPORTUNITY FOR AMERICANS FAVORABLE.

Consul-General W. H. Michael, of Calcutta, reports in regard to the importations of foot gear into India. In order to give American merchants and manufacturers a comprehensive view of what India has done in this respect, and consequently what the prospects for the future are, Mr. Michael furnishes a statement concerning the imports for a series of years, 1900 to 1905. The total importations amounted to 3,509,630 pairs, valued at \$9,003,772. The United Kingdom supplied 2,574,745 pairs in the five years, valued at \$1,931,220, the United States 25,480 pairs, valued at \$123,584.

The following are the number of pairs furnished by the countries named, no valuation being reported: Austria-Hungary, 392,436; France, 52,249; Germany, 141,539; Italy, 89,209; Spain, 47,100; Natal, 24,730; Cape Colony, 30,186; Ceylon, 12,531; China, 11,345; Japan, 77,707; Straits Settlements, 16,210.

Calcutta is considered by Consul-General Michael as fairly illustrative of all India. That city, he writes, imported boots and shoes during the year 1904-5 valued at \$428,820, of which the United Kingdom's share was \$342,013; Austria-Hungary's, \$16,925; that of the United States, \$11,815; of Germany \$4,394; of Switzerland, \$3,534; France, \$1,154; the rest went to Japan, China, and other countries. During that same year the boots and shoes manufactured in Calcutta were valued at \$47,231.

INDIAN METHODS OF MANUFACTURE.

Boots and shoes are made in Calcutta by harnessmakers as well as by shoemakers, and a remarkable feature about their work is their marvelous success in imitating American or European models. Consul-

General Michael cites a case in which he had a pair made by a harness maker. The result was a pair of shoes equally as good as those submitted for the harnessmaker to imitate, but a half less in price. The imitators are Chinamen and natives, the former are by far the more expert.

The fine grades of leather used are all imported from the United States, England, and France. The leather made in India is generally of poor quality. The United States furnishes Leicester with nine-tenths of all the glacé kid and box calf used in England, and nearly all that is used in India, most of the American product reaching India through English dealers. The local boot and shoe makers will make any kind wanted, using American leather, and imitating American-made goods for two-thirds the retail prices paid in America; and these goods are superior in style and finish to the English-made goods that flood the India market. The English goods are put on the market at prices to compete with the Indian-made boots and shoes. Most of the boots and shoes of the lower grades imported, and most of the same grades made here would find no market in the United States. For style and finish, all in all considered, there is no boot or shoe offered for sale in India that compares favorably with the American-made article. The nearest to it is the imitation made by the Chinese and native workmen. •

The prices of the various classes of boots and shoes imported into India range as follows:

Gent's brown lace boots ranging from \$1.32 to \$2.04 pair.
 Gent's brown Oxford shoes ranging from \$1.34 to \$1.80 pair.
 Gent's black lace boots ranging from \$1.28 to \$1.92 pair.
 Gent's black Oxfords ranging from \$1.36 to \$1.72 pair.
 Gent's patent leather shoes ranging from \$1.10 to \$1.48 pair.
 Gent's patent court shoes ranging from \$1.04 to \$1.18 pair.
 Ladies' brown shoes ranging from \$1.12 to \$1.68 pair.
 Ladies' patent kid shoes ranging from 96 cents to \$1.12 pair.
 Children's kid shoes ranging from 22 cents to 50 cents pair.
 Japan cloth and straw slippers ranging from 5 cents to 8 cents pair.
 Gent's boots and shoes, low and medium, ranging from 18 cents to \$1.68 pair.
 Ladies' shoes ranging from 18 cents to \$1.68 pair.

Except the last two items the price quoted include freight and insurance, while the two excepted items include the manufacturer's price only.

DESCRIPTION OF GOODS IMPORTED BY NATIVE DEALERS.

The description and prices of boots and shoes imported by native dealers in Calcutta are as follows, and may be regarded as an index for India generally: Boots, English, "Balmorals," \$1.56 to \$1.60 pair; boots, English, "Ammunitions," 96 cents to \$1.32 pair; shoes, pump court shoes, 94 cents to \$1.28 pair; boots, English, "Superior," children's, 58 cents to \$1.02 pair; shoes, English, "First quality," youths', \$1.14 to \$1.66 pair; English, "First quality," men's, \$1.54 to \$2.10 pair; canvas, German, rubber soles, children's, 38 cents to 46 cents pair; Austrian, rubber soles, children's, 60 cents to 66 cents pair; men's, rubber soles, 80 cents to 86 cents pair. Tan shoes of English make are a little lower than black. The above prices include freight and insurance.

In Bombay boots and shoes are imported almost entirely by retail dealers, and the imports by European dealers exceed the imports by native dealers ten times. In Madras the European dealers import 70

per cent of the total. The prices of similar goods laid down in Calcutta and Rangoon are substantially the same as given for Bombay and Madras. The European firms import a great variety of English boots and shoes of different names, makes, and classes. The average price of English boots and shoes of superior quality, imported by the European firms, is about \$2.64, while the average price of the ordinary quality is about \$2.06. English canvas shoes with red rubber soles are imported at an average price of \$3.12 for superior qualities and \$2.16 for ordinary qualities. American boots are also imported by the European firms. The price ranges from \$3.36 to \$5.64 per pair.

American manufacturers and exporters would do well to send thoroughly energetic and capable agents to India for the purpose of learning exactly what the demands for foot gear are and to make reports that would enable their principals to supply just the articles required.

SIBERIAN MARKETS.

EXCELLENT MARKET PRESENTED AT VLADIVOSTOK.

Consul Roger S. Greene, of Vladivostok, reports a chance for American boots and shoes to compete in that region with the German and Polish foot gear. He says:

The present suspension of import duties makes this a particularly favorable moment to secure a foothold and build up a good trade. At present there is little danger of serious competition from small shoemakers, who in China and Japan turn out custom-made shoes at such low prices, probably because Japanese and Chinese workmen in Vladivostok must be paid two or three times as much wages as at home. In the heavy boots worn by the peasants, laborers, and soldiers probably little can be done, the best chance being for ordinary light boots and shoes of the cheapest as well as more expensive grades.

Styles for sale may be both French and American, but principally the former. The long narrow toe and rather light soles are very popular for the better class of shoes. Laced and congress boots are most used, the latter especially in the cheaper grades. As for leather, calf, box calf, patent leather, and so-called "French glacé" are most common, both in black and in tan. On account of the cold in winter and the mud and rain during much of the spring and summer, boots or high shoes are much more popular than oxfords. Retail prices for the men's boots most sold range from \$3.75 to \$7 per pair, though there are boots of patent leather sold for \$9, but a dealer who wished to put in a line of American shoes told me he wanted to buy from the factory at prices between \$1.75 and \$4. This great difference between buying and selling price, while partly due to the local custom of charging large profits, is also caused by the heavy expenses for rent, freight, insurance, landing charges, etc., to which local merchants are subjected.

Retail prices for oxfords are about \$1 less than for boots. Top boots sell at from \$6 to \$11 per pair. They are much used both by military officers and by persons living in the interior. The ladies' boots most sold cost from \$2 to \$4 per pair, though more expensive boots are also sold.

RUBBER SHOES—FOOT WEAR DEALERS.

A very large quantity of rubber overshoes and arctics is used, as practically every man, woman, and child who can afford to wears them,

as they are indispensable against the winter cold and the muddy spring. Those now sold here are mostly made at St. Petersburg and at Riga. They are of very thick rubber, especially those for winter use, with a lining of wool or cotton. On account of this thickness the rubbers can be slipped or stamped on without using the hands, not such a trivial consideration when muddy rubbers must continually be taken off or put on. The most common kind is made with a high front that nearly covers the whole of a low shoe. Men's rubbers sell for \$1.50 or \$1.75, ladies' for from \$1 to \$1.50, the retailers making a comparatively small profit on them. The largest number of shoes is probably sold by the two large department stores [names of which can be secured by the Bureau of Manufactures as well as those of small dealers].

SPANISH PURCHASES.

COUNTRY PRESENTS MARKET OPENING FOR THESE PRODUCTS.

Vice-Consul Charles Karminski, of Seville, writes that most of the fine leather intended for the manufacture of shoes in Spain is imported from France and Germany. The American leather, which is a great favorite with all the shoe factories, is finding its way thither largely through German houses. This indirect course increases the price and discourages its more general use.

The untoward position of American leather in the Spanish market is also due to the rigorous terms of payment which the tanners of the United States exact. More leniency in this respect would have an excellent effect. American footwear is making wonderful strides toward general popularity in the Spanish market, and is considered superior in its combination of comfort and elegance. Manufacturers, however, confine their purchases to a few samples, after which they model their orders for American shapes. Needless to say their efforts in the imitative field are more or less a failure, as they possess neither the skilled hands nor the indispensable mechanical contrivances, and their prices, varying from \$6.50 to \$9.50 per pair, of American style shoes are prohibitive to all save the wealthiest classes. Under these circumstances the suggestion of the establishment in Seville of a representative house for the sale of American shoes might well merit the attention of the manufacturers of the United States.

[Addresses of dealers in hides and skins, leather, and shoe and leather manufacturers are given by the vice-consul and can be secured from the Bureau of Manufacturers.]

TRADE ACTIVITY.

SHORTAGE OF SUPPLY—AUSTRALIAN ADULTERATIONS.

Several trades besides the boot industry are somewhat seriously disturbed by the shortage of the leather supply, coupled with the gradual advance in prices which has taken place during the past two or three years. Several reasons are put forward by the London Commercial Intelligence to explain the present scarcity of leather. The American supply is said to have been greatly reduced, owing to the fact that Americans themselves use most of the hides produced. In addition, the famine in India is regarded as responsible for a shortage

in the supply, while it is also suggested that the motor car has increased the demand for leather. As an example of the extent of the increase in price, it is stated that imported (American) leathers have advanced 10 to 12½ per cent on common sorts, such as box-hide and oil-grain leather, and waxed splits for heavy boots and leggings from 20 to 25 per cent, and all bid fair to go still higher. The rise in American raw hides in the past five years has ranged from 33 to 66 per cent. With high prices leather adulteration has become almost general, and, concludes the Intelligence, "we are glad to learn from our Sydney correspondent that Australia, a bad if not the worst offender, has issued regulations to check the practice."

EMBARGO ON ADULTERATED LEATHER.

Acting under the provisions of the Federal commerce act, the Federal customs authorities of Australia have taken an important step by prohibiting the export of all adulterated leather, unless so branded, refusing to allow even a 5 per cent dressing of glucose and oil, unless the nature and quantity of the ingredients are given. In view of this several Australian tanners threaten to send their leather to London to be dressed.

An official report on the chrome-tanning experiments in Madras Presidency, India, states that the natural color of the Kavalais leather is a pale green or light lavender blue, and for footwear and harness it has to be dyed. The cost of chroming is higher than bark tanning, which retards the development of the new industry.

SKINS IN EUROPE.

AN ACTIVE DEMAND AND DEPLETED SUPPLY.

Consul-General Richard Guenther, writing from Frankfort, Germany, in regard to the trade in hides and skins, says:

The demand for raw skins was very good and the prices profitable. The number of Russian calfskins received during 1905 was less than in 1904. German calfskins were high priced, bringing from 10 to 12 per cent more than a year ago. Salted German calfskins, which are used for manufacturing the so-called box-calf leather, were 20 per cent higher at the end of 1905 than in the early spring.

The United States bought large quantities of Russian calfskins direct from Russia, so that a smaller quantity than usual went to Germany, and there is now no stock on hand. Sheepskins were scarce, mainly on account of the drought in Australia and because sheep raising is on the decline in other countries. This decline amounts to 50 per cent in Germany and 40 per cent in Hungary in thirty years. The advance in price is, therefore, large, in some instances being more than 30 per cent. Prices of German goatskins advanced 20 per cent for best winter goods, and coney skins were from 15 to 20 per cent higher, the advance being caused by a large demand for best hair for ladies' hats.

BUFFALO HIDES.

CONTENTION AS TO RATES OF DUTY.

The Treasury Department is seeking in the circuit court of New York the reversal of a decision by the Board of Appraisers in New York that East Indian buffalo hides are entitled to free entry. The

question at issue is whether such hides are to be regarded as "hides of cattle," as that term is used in the tariff, or as "hides not specially provided for."

The Treasury Department maintains that these buffalo hides are hides of cattle, and are therefore subject to 15 per cent duty. Several years ago the question as to the classification of these so-called buffalo hides came up and was passed upon by the Board of Appraisers and the Federal courts. All of the tribunals found against the importers. The matter then went along for some years when the importers presented another case to the Board of Appraisers, which ruled in their favor, sustaining the claims for free entry. The Treasury Department does not accept this ruling, which was against the previous decision of the courts, and has decided to have the matter again submitted to the courts with a view to having these so-called buffalo hides designated as hides of cattle. The issue is of great interest to the tanning and shoemaking industries.

ARGENTINE TANNERIES AND SHOEMAKING.

Consul-General G. C. Cole writes from Buenos Ayres, giving information concerning the shoe and leather business of Argentina, as follows:

There are 200 tanneries in the Argentine, which are said to have a capital of about \$6,500,000 and which employ some 6,000 men. They are said to produce hides to a value of \$20,000,000, of which \$13,000,000 are ox and cow hides, \$3,000,000 calf skins, and \$4,000,000 sheep skins. There are about 100 shoe factories in the Republic, which are said to produce annually some 18,000,000 pairs of shoes. There are also 60 factories producing an article called "Alpargatas," a shoe made of canvas, used largely by the natives. The production of this footwear is said to amount to about \$5,000,000 per annum.

CORK-SOLE SUBSTITUTE.

The following item from a German paper should be of interest to American shoe manufacturers, relating, as it does, to an article that enters largely into their products:

A substitute for cork to be used for cork soles, etc., is produced, according to experiments by Erdmann and Kothner, through the action of acetylene on copper, nickel, or their oxides under a temperature of 200 to 250 degrees. The product is unusually light, and may be cut with a knife into any desired form. The density is about one-half as great as that of cork. It resists water and does not absorb it.

TRANSPORTATION.

RAILWAYS.

CONTROL BY AN AUTOMATIC DEVICE.

REMARKABLE AND USEFUL INVENTION IN ENGLAND.

Consul J. L. Griffiths, of Liverpool, calls attention to an exceedingly timely, and from all accounts successful, system of arresting trains automatically. It is said to be of great value in cases of danger. While no description, except one with drawings and photographs, ever does justice to machinery, the following report of Mr. Griffith may serve to excite interested parties to send for full description, or, better still, to cause the machinery to be examined by a competent engineer. The consul writes:

For about two years a system of automatic train control has been in use on a portion of the lines of the North Staffordshire Railway Company. The officials of the company were so pleased with the efficiency of the system that they determined recently to test it in a larger way by placing it in service at one of their most important junction points where the traffic is unusually heavy. Representatives of several of the leading railways in England were present at this test, and expressed great satisfaction with the result. Whenever it is prudent, on account of a dangerous curve, such as caused the recent disaster at Salisbury, or for any other reason, to permanently reduce the speed of trains, it is claimed that this can be automatically accomplished so that the safety of passengers will not be jeopardized by careless or reckless engineers. The following description of the invention was published in the Liverpool Post and Mercury:

The system, of which Mr. Thomas E. Raymond Phillips, of Liverpool, is the inventor, is remarkable for its ingenuity and simplicity. Its most commending merit is its reliability.

THE NEW SYSTEM.

For a long time a system of signaling has been almost universally in use which repeats in the signal cabin the condition of the signals which are controlled from that cabin. So many signals are not visible from the cabins from which they are operated that the value of this safeguard is quite obvious. The Raymond Phillips invention carries this principle a further stage, and achieves an even more notable and important precaution by repeating the state of the signals not only in the signal box but also in the cab of the locomotive, and so insures that the driver shall at all times have a clear view of the condition of the signals governing the road over which his engine is to run. This

is accomplished by means of pneumatically operated miniature semaphores fitted up in the cab of the locomotive. Opposite each line signal a set of 'trippers' in duplicate is placed in the 4-foot way. The trippers are mechanically and electrically connected with the ordinary signaling apparatus, and stand erect or lie flat according as the signals show 'danger' or 'line clear.' Beneath the locomotive there are two striking levers moving either way, which project such a distance as to meet the trippers when they are erect and to pass over them altogether when they are lowered. When 'danger' is signaled, therefore, the striking lever is thrown back by the upstanding trippers, with the instant effect that the semaphores in the cab of the engine faithfully reproduce the signal, and the levers, after striking the trippers, remain securely locked until released by the driver. But that is not all. Should the driver for any reason disregard the signal his train is automatically pulled up quite independently of his own operations, and simultaneously a warning note is sounded by a horn on the locomotive, so that he is warned of his position both by visual and audible signals. At the same moment the signalman is warned of the irregularity by means of a special repeater fitted in the signal box, and an alarm bell is set going and continues ringing until he acknowledges it by pressing a plunger in the repeater.

SIMPLE IN OPERATION.

In actual operation all this is very much simpler than perhaps appears from the description. So easily and with such prompt response does every part of the apparatus work that the probability of any portion of it being thrown out of gear is, to say the least of it, exceedingly remote. But in the event of such a contingency occurring, either from accidental breakage or deliberate tampering, the mishap can scarcely be attended with any element of danger. Complete provision is made for a contretemps of that sort. The immediate effect of the failure of any part of the apparatus to fulfill its appointed task would be that both the driver and signalman would be warned, and the line upon which the accident occurred would be blocked. If the tripper mechanism, for instance, were to be put out of action, the signalman would be given instant warning—a disk would fall on the repeater in front of him disclosing the words 'Out of order,' and at the same time an alarm bell would ring. Moreover, if any breakage should take place, its rectification would be a matter of very little time and very little trouble, as all parts of the system are interchangeable. Breakages, indeed, would be very rare, judged by the working of the system up to the present. For nearly two years the Phillips Syndicate have had a locomotive fitted up with their apparatus, and although it has been in constant use there has been no occasion to replace a striking lever, and every part of the mechanism is still in first-class order.

BUILDING IN CHINA.

DANGERS AND DIFFICULTIES THAT MUST BE OVERCOME.

Consul T. Haynes, of Nanking, sends an extract from a report issued by the Imperial customs authorities of Mengtse. It deals with the dangers from disease and the difficulties of various kinds confronting

the builders of the railway that is to pass through the Namti Valley. It would seem as if China has her hands full of evils not unlike those encountered upon the Isthmus of Panama. Consul Haynes writes:

A recent report concerning railways in China says: "The construction of the railway between Laokai and Yuannanfu (the great enterprise to which all well-wishers of Yunnan look forward as one of the means of permitting this province to take her proper place in the markets of the world) has been perseveringly pushed forward in the face of great difficulties both climatic and economic. The vile climate of the Namti Valley has levied a heavy toll on those who have dared to open up its primeval jungles and gullies. The death rate among the coolies imported from various parts of the Empire and put to work in this dreaded valley, may, without exaggeration, be estimated at 5,000, or 70 per cent of the total number employed on that particular section of the line. The company has made praiseworthy efforts to counteract the evils of the climate in this valley. They have constructed a large number of suitable dwellings both for foreigners and natives, and have doubled the number of hospitals, placing as many as seven doctors on the first 150 kilometers from Hokou.

"Instead of attempting to carry on the work in the Namti Valley all the year through the work is suspended almost entirely during the summer rains and the coolies moved up to the works on the high and healthier plateau. This measure, while it economizes the life of that most important individual in the building of any railway, namely, the coolie, must considerably delay the completion of the line, and we must therefore wait till 1910 at least for that great desideratum—the linking up of Yunnanfu with Haiphong.

"The year under review marks an important epoch in the history of French railway enterprise in Indo-China. On Christmas day the first locomotive reached Laokai on the Tonking Yunnan border, and it is hoped that the coming spring will see the commencement of a through railway service between Haiphong and Laokai."

OPENING ANGOLA.

PORTUGUESE COLONY IN AFRICA NOW DEVELOPING.

The development of Angola, a Portuguese possession in South Africa, is the subject of an optimistic report by British Consul Mackie. The total values of exports and imports last year were \$13,053,412, as against \$14,288,530 in 1904.

There are now four railways in existence or contemplated. The Loanda-Ambacca, or Royal Trans-African Railway, is 225 miles in length and belongs to a company, but an extension of about 100 miles to Malange is being built by the Government. The Benguella-Katanga line, the principal railway enterprise, is being constructed by English capitalists, and will run 1,200 miles into the heart of Africa till it joins the Cape to Cairo system, and probably by the shortness of the route capture much of the business to Northern Rhodesia that now goes over central African lines. The length open to traffic is 23 miles, and construction of the remainder is being steadily pushed forward. The Mossamedes-Chella line is another State road, intended at first to be 28 miles in length, in order to supply the Plan Alto table-land with

transportation facilities, but liable to future extension. Another railway project, which so far has only been officially approved, is a line in St. Thomé which is to unite the capital of the island with the cocoa and coffee plantations. These different schemes, all being perfected or inaugurated at one time, point to a revival of industrial activity in Angola.

NEW LINES IN MEXICO.

EXCELLENT OPPORTUNITY FOR AMERICAN MANUFACTURERS.

Vice-Consul J. H. Brickwood, of Nogales, reports a new and seemingly important railroad project in his district, of which he says:

Additional evidence of American enterprise in Mexico is furnished by a projected railway in this (Sonora) district. It will be the means of opening up a most valuable mining territory hitherto kept from advancing because of its comparative inaccessibility, except by burro and wagon trains. As originally intended, the new road was to be built from Port Lobos, on the Sonora side of the Gulf of California, to Caberca, a distance of about 50 miles, concessions for which had been obtained. After surveys had been made the field looked so promising that it was determined, if possible, to extend the line 150 miles farther, to Tucson, Ariz., crossing the boundary line at a point near the junction of the Altar and Magdalena districts. A concession has recently been granted by the Mexican Government for the strip from Caberca to the boundary line.

The route from the Gulf port to Caborca has been completely surveyed, and the work of building that portion will begin early in November. Surveys of the route between Caborca, Sonora, and Tucson, Ariz., will be taken up by railway engineers next month, or just as soon as the rainy season is ended, and will be vigorously pushed to a conclusion. As soon as practicable construction work will begin, and every effort made to have the new line between the Gulf and Tucson, Ariz., completed at an early date. As Port Lobos is about 300 miles above Guaymas, on the Gulf, the new line will save about 250 miles.

This new road will impart new life and vigor into mining enterprises which have languished because of high rates of wagon freights and the great time consumed in shipping ores and obtaining supplies—a week now being taken where only a few hours' time will be required for similar service when the new road and its branches are completed. As a matter of economy, one feature alone is of valuable consideration. At present the coke consumed in the big smelter at Calera, now furnished from the United States, costs \$14 per ton laid down in Santa Ana, a station on the Sonora Railway, from which point it must be hauled 75 miles by wagon to Calera. Coke from Spain can be laid down at Port Lobos for \$8.50 per ton. From this point to the smelter the distance by the new rail route will be less than 50 miles.

IMPROVED TRAVELING IN MEXICO.

Consul-General Philip C. Hanna reports that the Mexican Central Railway has completed its connection between Monterey and Saltillo and regular daily trains are running over that line. Monterey has now two railroads connecting it with Saltillo. It is stated to be the

purpose of the Mexican Central road to run through trains daily, in the near future, from Saltillo to Tampico by the way of Monterey, and each of these trains will have a Pullman sleeper, which will afford additional comfort for passengers coming on ships from New York by the way of Tampico bound for the interior of the Republic.

NORTHWEST FREIGHT RATES.

CANADIAN ANNULMENT OF ALLEGED AMERICAN ADVANTAGE.

Consul-General John G. Foster, of Ottawa, supplies a copy of an order rendered by the board of railway commissioners for Canada, purporting to correct an alleged freight discrimination in favor of shipments from the United States to British Columbia. It reads:

In the matter of the complaint of the boards of trade of Vancouver and New Westminster, British Columbia, and the Canadian Manufacturers' Association, that the Canadian Pacific Railway Company unjustly discriminates against the coast points of British Columbia in exacting higher rates and more onerous conditions with respect to freight traffic which originates in eastern Canada than with respect to similar traffic which originates in the United States, and which is carried by United States railway companies or by United States and Canadian railway companies jointly, to the same destinations in British Columbia. The board doth order—

First. That, with respect to the additional toll of 5 cents per 100 pounds charged to certain British Columbia points on all classes of freight traffic which originates in the Eastern States of the American Union, which is now added and charged also on freight which originates in eastern Canada and destined to the same British Columbia points, the companies shall henceforward and until further ordered by the board cease and desist from charging the said additional toll on the said freight traffic which originates in eastern Canada.

Second. That, for the minimum carload weights as now charged for certain descriptions of freight for which shippers may require cars longer than the standard car of 36½ feet in length, the company shall substitute the minimum weights prescribed in the Canadian freight classification, as approved by the board.

Third. That the same allowance shall be made for the weight of lumber or other material used for the purpose of bracing, blocking, racking, or otherwise safeguarding carload shipments of freight requiring such protection to points in British Columbia as are similarly made to other points in the Dominion of Canada.

EXHIBITION TRAIN.

JAPANESE ARRANGE A NOVEL ADVERTISING SCHEME.

Consul-General Henry B. Miller, of Yokohama, reports a new venture on the part of Japanese merchants in the matter of advertising.

The Jiji Shimpō, a Tokyo newspaper, has arranged, after consultations with the railway bureau, the Nippon Railway, and the Gyanyetsu Railway companies, to run an exhibition train, in which the merchandise of leading stores in Tokyo will be exhibited for sale. The exhibition train will consist of three large passenger carriages. One or two cars

will also be attached as storehouses. The train was scheduled to leave Omiya about the middle of September and proceed to various towns, and returning after covering a distance of about 1,500 miles in about forty days.

TROLLEY IN SYRIA.

ELECTRIC TRAMWAY CONCESSION FOR BEIRUT.

William C. Magelsson, vice-consul-general at Beirut, reports that the official Gazette at Constantinople has recently announced that an Imperial irade, sanctioning the construction of an electric tramway in Beirut, has been granted.

The concession has been given for ninety-nine years in the name of Negib Pasha Melhame, a Syrian. Belgian capitalists immediately arranged to purchase the grant, and paid for the same the sum of \$194,660. They have been compelled to pay \$48,665 as a loyal donation to the Hedjaz Railway and deposit a certain amount with the Imperial Ottoman Bank by way of guaranty for the execution of the venture. The company will operate under the name "Société Ottomane Anonyme des Tramways et Eclairage Electrique de Beyrouth," and its headquarters will be at Constantinople. Its capital is fixed at 6,000,000 francs (\$1,158,000), divided into 60,000 shares. Three million six hundred thousand francs (\$694,800) are to be fully paid up and the balance paid when needed. Each administrator of the company must possess at least 50 shares. There are to be four obligatory lines and three optional lines.

The gas company of Beirut has, by virtue of its concession, the optional right of lighting the city by electricity. If after three months' notice it should fail to undertake the work it will forfeit its privilege, and in that event the new company will take over the lighting. Various benefits will accrue from the introduction of the tramway. Besides furnishing a cheaper mode of transportation it will materially alter the present condition of the streets. They are to be macadamized and a proper system of sewers constructed. The rough roads will no longer exist.

It is to be presumed that all materials for the construction of this tramway will be furnished by Belgian and French firms. I regret that there is not here some official of the company with whom I might communicate on this score. I wish, however, to suggest that interested parties communicate with "Société Ottomane Anonyme des Tramways et Eclairage Electrique de Beyrouth," Constantinople, Turkey.

ACCIDENTS IN INDIA.

OPENING FOR AMERICAN SAFETY APPLIANCES.

Consul-General William H. Michael, of Calcutta, writes that the total number of miles of railroad in India is 28,295. On this mileage the last report shows that 979 persons were killed and 576 injured during the year 1905. Of those killed 115 and of those injured 356 were passengers. The others killed and injured were persons passing over level crossings, trespassers, suicides, etc. In addition to these,

68 persons were killed and 307 injured on railway premises through causes other than the movement of trains. The consul says:

There is much room for improvement in railroading in India, and it seems to me that here is an opening for the introduction of American safety inventions for the handling of trains. The roads belonging to the State might be slow to adopt a foreign safety invention, but the private roads are more independent, and seem willing to adopt those inventions, regardless of their origin, which will reduce their losses and enhance their profits.

STEAMSHIPS.

NEW LINE TO MALTA.

IMPORTANCE OF DIRECT COMMUNICATION POINTED OUT.

Consul J. H. Grout, of Valetta, in writing on the influence on commerce of direct lines of steamships, furnishes suggestive and significant facts.

One of the great obstacles to the increase of trade in American goods in this island has always been lack of direct communication. To be sure, a few lines of our goods have always been found on sale here, but these goods have reached this port by transshipment from other and intermediate places and have been only such as have been peculiar to our country or sent by European houses dealing in specialties of various nationalities. This was the state of affairs from the time of the cessation of sailing vessels from the United States up to 1899. During this period no American goods reached here direct from the United States.

In the latter part of 1899 the management of the Mediterranean and New York Steamship Company, an English concern, instituted a branch line to its already large business in the Mediterranean, the steamers of which made regular monthly, and frequently oftener, sailings between New York and Malta with a final port of discharge at Trieste, Austria. The effect of this direct communication with the United States was felt immediately. Local buyers were not slow to discover that with the advent of the new line they could avoid costly freight rates and express charges, but also that they could deal with American houses to much better advantage than by the transshipping methods of earlier days. Another advantage which they found was that direct communication made delivery quicker and minimized damage in handling. Several vessels were assigned to this direct service. Earnings at first were small, but as the value of this route was learned by experience there was an increase in patronage which finally made the line a fixture and one to be depended upon.

WHAT BETTER TRANSPORTATION FACILITIES ACCOMPLISHED.

The following figures will give an idea of what direct communication accomplished for our trade. It is made up from United States customs statistics, and is based upon the value of goods shipped to Malta from American ports. Quite a large quantity of the goods arrived here by

the old routes but at the same time the sudden increase of goods exported to Malta began at the time the direct line was established. No matter which route was used the direct communication which was provided had something to do with it. The first five years, it should be observed, were without the above facilities, the direct communication not starting until late in 1899: 1894, no record; 1895, no record; 1896, \$34,683; 1897, \$29,520; 1898, \$64,352; 1899, \$144,080; 1900, \$175,734; 1901, \$438,982; 1902, \$321,251; 1903, \$453,529; 1904, \$359,539.

In view of the fact that local statistics are only based upon the valuation of goods that are dutiable, and that many of the lines of goods sent to Malta from the United States are not upon the list, not paying duties, it is clear that our position in the comparative list should really be higher up.

Such was the condition of affairs until about a year ago, when, owing to business reasons, the vessels that had been assigned to this service were sold to Japanese parties. Direct communication at once suffered, and business between American and Maltese merchants fell off, owing to the fact, among other reasons, that steamers did not afterwards arrive here regularly, but spasmodically. My annual report for 1906 will show this. However, I am pleased to inform our merchants that a remedy has been provided, and to such an extent that I believe that we shall not only make up for lost time and business but be able to do better than before. The Austro-American Steamship Company, which employs a large fleet of vessels, has decided, after due investigation, to take up this service, and has assigned enough vessels to this route from New York to provide at least monthly sailings to Malta from the above port, and, furthermore, it will provide additional ones as freight offerings seem to warrant.

BRAZILIAN-AMERICAN CONNECTION.

A NEW MONTHLY STEAMSHIP LINE TO THE UNITED STATES.

Consul-General G. E. Anderson reports the establishment of a line of steamships between Brazil and the United States. He writes:

In spite of predictions to the contrary, the new direct service between the United States and Brazil by a Brazilian steamship company is to be inaugurated by the steamer *Coyaz*, formerly known as the *Castro Alves*, leaving Rio de Janeiro for New York, calling en route at Bahia, Pernambuco, Ceara, Maranhão, Para, and Barbados. The service is to be monthly, and there are bright things ahead for exporters to the United States, according to the expectations of Brazilian shippers. The result of the inauguration of the service, however, is doubtful. The ships to be employed are small, and their accommodations are not such as to offer any improvement over present service. The large number of stops will militate against through service, although it may attract considerable local business. The "Lloyd Brasileiro," the company owning and operating the vessels, is a subsidized concern. It is a strong organization when considered with its Government support, and it will doubtless make a great effort to establish a permanent and satisfactory business. Its coasting fleet, which has for a considerable time enjoyed what amounts to a monopoly of the coasting trade, is a strong one.

Merchants complain that the high freight rates obtaining on goods from the United States to Brazil generally continue to act as a deterrent to trade in general. The conference rates on goods from the United States to this part of South America are nearly twice as high as freight rates from Asiatic ports to the United States. While there may be particular reasons why charges should be some higher, there is no reason for so great a difference as exists; and if the inauguration of this new Brazilian service will eventually have the result of lowering the rates somewhat it will have accomplished much for the foreign trade of Brazil and the United States.

URUGUAYAN SHIPPING FACILITIES.

THE GOVERNMENT'S EFFORTS TO OPEN INTERIOR PORTS TO COMMERCE.

Consul J. W. O'Hara, of Montevideo, reports improved shipping facilities at Montevideo. A copy of an act granting certain shipping privileges to a steamship company accompanied Mr. O'Hara's report. It is on file in the Bureau of Manufactures. The consul writes:

Great inconvenience has been experienced in the past by persons desirous of shipping to or from the interior of South America through the port of Montevideo on account of delays, expenses, and unsatisfactory shipping arrangements. This matter has now been so arranged as to obviate all former difficulties. The executive of this country has recently granted to the Nicolas Mihanovich Steam Navigation Company the privilege of establishing at this port a floating warehouse or deposit for merchandise coming into this port destined for Paraguay, Bolivia, Matto Grosso, and the Upper Uruguay, as also the products of those localities destined for exportation. The decree stipulates as a prerequisite to the continuation of the franchise that the company shall establish and maintain a regular weekly service between this port and the head of navigation on the Upper Paraguay-Corumba, Brazil.

The establishment of a depot at this port and a regular line of steamers to the interior points named will be of great advantage to shippers. There are two points to be particularly observed: First, that all merchandise intended for upriver ports must be so designated in the manifest and in the consular invoices; second, that all such merchandise must be shipped in care of the Nicolas Mihanovich Steam Navigation Company (Empresa Navegación á Vapor Nicolas Mihanovich), Montevideo. I have been informed by the agents that such specific designation must be made in order to avoid delay in transshipment.

CANADA-MEXICO LINE.

STEAMSHIP COMPANIES SUBSIDIZED BY GOVERNMENT.

From Consul E. A. Wakefield, of Orillia, comes the report that Captain Worshop, representing the English firm with which the Mexican Government has signed a conditional contract for a direct steamship line to ply on the Pacific between Canadian and Mexican ports, has arrived in the city of Ottawa to obtain the signature of the minister of trade and commerce to the same contract. The Government is

already committed to the arrangement, so that there probably will be no delay in arranging for the immediate inauguration of the service. The terms of the contract are that the governments of Canada and Mexico will each contribute an annual subsidy of \$68,000, in consideration of which the company will maintain a monthly service between the Canadian ports of Victoria and Vancouver and the Mexican ports of Manzanillo, Acapulco, and Salina Cruz. Meantime the subsidized Canada-Mexico line on the Atlantic is doing an excellent freight business.

Consul A. E. Smith, of Victoria, corroborates the above report, but states that the subsidy fixed is \$50,000 from each Government. The service, he states, will be started next January with two 4,500-ton steamers. Canadian exports to Mexico fell from \$124,058 in 1904 to \$113,455 in 1905, while imports to Canada from Mexico dropped from \$262,600 in 1903 to \$176,786 in 1905.

BRITISH SHIPBUILDING.

DULL PROSPECTS FOR THE YARDS.

Consul H. W. Metcalf, of Newcastle-on-Tyne, transmits an extract from the Journal of that city, stating that the shipbuilding prospects are very dull. The article states that the dearth of new orders is very ominous for the future, especially for those yards which depend upon the building of tramp steamers. It is stated that there is work enough in the yards to last until March, but after that many of them will be sorely in need of orders. Sir Charles McLaren, the chairman of the Palmer Company, says that the shipbuilding trade of Great Britain is in an anomalous condition. The demand for material is large and prices are high. The cost of production, therefore, is great. On the other hand freights are low and the demand for ships is limited. Many people, he said, took an optimistic view of the future, but he thought that the high prices at present ruling for iron and steel and metals and materials were largely the reflection of greater trade activity in America and Germany. When that activity ceased and those countries were in a position to supply their own requirements of iron, and even to supply England's, the home trade might undoubtedly suffer a serious setback. On the other hand the excellent harvests throughout the world and the increasing prosperity of all nations made better employment for ships which might lead to renewed activity in shipbuilding.

NEW ROUTE TO EGYPT.

The Royal Romanian Steamship Line and the Nord Deutscher Lloyd have made a mutual arrangement by which the operations of the former company will be extended to Alexandria, Egypt. The new service will begin on October 18, from Constanza, calling at Constantinople and Smyrna and connecting with special fast trains from Berlin to Constanza. The new service, which heretofore operated only to Smyrna, enables the passengers to travel to Egypt quickly via mid-Europe and by nineteen-knot steamers to Alexandria.

AUTOMOBILES.

HORSEPOWER OF MOTORS.

THE GERMAN STANDARD GAGE FOR ALCOHOL AND BENZINE.

Vice-Consul Charles Karminski reports a formula fixed upon by the German Government as a basis or gage for getting at the horsepower of benzine or alcohol fed automobiles. He writes:

A memorial, subscribed by a large number of autocar builders and addressed to the imperial treasury department, acknowledges their unanimity on the point of accepting the following formula for determining the horsepower of autocars, viz: N equals $0.3 i d^2 s$, in which N signifies the horsepower to be ascertained; d , diameter of cylinder; i , number of cylinders, and s , stroke. The formula is based on an allowance of 3.8 kilograms (8.36 pounds) to the square centimeter as the mean pressure of the piston and 900 revolutions to the minute, and has been pronounced satisfactory by the technical department of the imperial treasury. The "Mitteleuropäische Motorwagen-Verein" (Automobile Association of Central Europe) has agreed also to accept this formula, which, according to the imperial treasury, will be recognized by the administrators of taxes in the federal states until the respective supplementary clause will have been added to the provisions of the imperial stamp law. The proposed formula is applicable, however, only to gauging the horsepower of autocars fed with benzine or alcohol, in which connection it is left with the builder or dealer in such cars to supply the buyer with an authenticated certificate from the factory, showing the horsepower of each car, arrived at by means of the formula in question.

Relative to ascertaining the horsepower of electric motors, investigations are now on foot, the result of which will be duly enunciated upon their termination. To determine the horsepower of the old types still in use, the gauge which in most cases builders place on the trade-mark which their cars bear will be considered as authoritative. Should the taxpayer in such cases, however, declare the horsepower of his car to be less, he will be expected to prove the actual horsepower by producing a satisfactory certificate from some competent authority.

AUTO-BUSSES IN BARCELONA.

PAY WELL WITH TWO-CENT FARES AND EXPENSIVE FUEL.

Benjamin H. Ridgely, consul general at Barcelona, reports that a street-car service of auto-busses has just been inaugurated there and is reaping a rich reward of 2-cent fares from an appreciative public.

The busses run from the central plaza of the city to a busy section about 2 miles distant and are giving a five-minute service, with fares of 10 centimos, equal nominally to 2 American cents. They are strong and fairly comfortable vehicles, capable of transporting about 30 passengers—15 on top and 15 inside. They are equipped with benzine motors of 24 horsepower and make about 20 per cent faster time than the electric street cars with which they compete.

The motors of these vehicles were constructed in France; the coach work was manufactured in Barcelona, and the wheels are equipped with solid rubber tires of German manufacture. They cost complete 40,000 pesetas (about \$7,000) each. Gasoline in Barcelona sells at about 60 cents a gallon and lubricating oil at about \$1.60 a gallon, but in spite of these abnormal prices the auto-busses, which have now been running since the middle of August, give such promise of earning good money that the company within a few weeks will have two or three other lines running, with a total of 35 busses in the service. The address of the company is La Catalana (Compania Omnibus), 232 Calle Aribau, Barcelona, Spain.

Barcelona has a population of nearly 700,000 within the city limits, and is the third city in Europe to establish a street-car service of auto-cars, the other two European cities being London and Paris.

MOTORS IN GERMANY.

CONSIDERABLE SUCCESS ALREADY ACHIEVED IN THEIR MANUFACTURE.

T. St. John Gaffney, consul-general at Dresden, reports progress in automobile building in Germany. He calls attention to the empire's efforts to keep ahead in its manufactures and furnishes evidence of the success of these efforts. He supplements his report by a reference to the law passed in 1905 to tax motor-cycles and automobiles. He writes:

The manufacture of automobiles developed in 1905 and the first half of 1906, to an extent probably unparalleled by any other class of goods. Foreign countries, in particular, could not be supplied fast enough with motor buses and cabs. Numerous orders were also placed by big German omnibus companies and private contractors. The motor-cab traffic in Berlin and Dresden has increased considerably and will continue to do so at a still faster rate. Motors of themselves were found useful for several military purposes. Prices for raw materials are permanently on the rise, but it is still quite possible to put on the market serviceable cars of stout build at from \$750 to \$900. Most of the motor cars in use in England both for freight and passengers, are made in Germany. The London county council gave one order to a German company for 300 buses; and I was told in London recently by an Englishman that the English were two years behind the Germans in the manufacture of motor cars. One firm in Dresden has sold 110 high-power Mercedes 1906 cars.

AID FROM ASSOCIATIONS.

The German Motor Cyclists' Association, whose self-imposed business is to look after the cheap, small car, have decided to hold a reliability run for vehicles priced at about the figures mentioned above, and they would not do this unless they were tolerably sure of a fair show of entries.

A German company has manufactured 200 omnibuses for a London company. In appearance the vehicles are neat and compact, and their finish, although simple, offers every comfort desirable in a public conveyance. The omnibuses are fitted with 28 to 34 horsepower four-

cylinder motors, which are completely inclosed and effectually protected from dirt and dust. Four different speeds can be developed, the maximum being 25 kilometers an hour (about 15 miles); they run very quietly and are built to hold 16 passengers inside and 18 outside. Two foot brakes and one hand brake enable the omnibuses to be stopped within their own length.

ITALIAN TRADE.

EXTENSION OF MOTOR MANUFACTURING.

According to Consul-General Richard Guenther, of Frankfort, the German consul in Genoa reports that the manufacture and exportation of Italian automobiles is rapidly increasing.

Numerous factories have of late been established in northern Italy, especially in Turin and Milan. Two were recently erected in the province of Liguria, but are not yet in operation. The imports of automobiles at Genoa during 1905 were 118, of which 98 came from the United States, 14 from France, 2 from England, and 3 from Germany. In the same year 83 automobiles were exported from Genoa; of these 54 went to the United States and 11 to Argentina. It is only a question of time, adds the Genoa consul, until the Italian motor industries will be manufacturing automobiles for freight and general transportation service.

CARS IN IRELAND.

MOTORS GROWING IN POPULAR FAVOR—AMERICAN CARS IN IRELAND.

Consul H. S. Culver, of Cork, finds that, while motor cars are not in very general use in the south of Ireland, they are rapidly multiplying and growing in favor with the business men and gentry. He writes:

I have been unable to find one American car in this part of the country. Those in use are mostly English, with a few French and German. Firms from these countries are represented here, but no American firms. The impression seems to prevail that the American machine is inferior in many respects to those of the English, German, or French make, yet without any apparent knowledge of the American machine. I can assign no reason why the American machine should not find sale in this country and successfully compete with the ones named. I refer, of course, to the lighter and cheaper machines—four-cylinder, four-seated cars—ranging in price from \$1,000 to \$1,500 or less. It would be useless to carry a stock of higher priced cars in a city the size of Cork. The high-priced cars are only carried in the larger cities of the British Isles. Reliable local agents can be secured. One each in the cities of Cork, Dublin, and Belfast should be sufficient.

TEXTILE TRADE.

MANUFACTURE OF SILK.

INDUSTRY IN UNITED STATES REVIEWED.

RAPID ADVANCE IN WORLD'S SUPPLY OF RAW MATERIAL—GROWTH OF THE INDUSTRY.

The Silk Association of America, in its semiannual review of the silk industry recently issued, states that the present equipment of American mills is equal to an output for broad silk fabrics alone of \$82,500,000. A limited supply and consequent high cost of raw materials tend, unfortunately, to limit the production of equipment. The report adds:

Assuming 12 pounds per throwing spindle to be the average production of the present "throwing" equipment of the United States, say 1,300,000 spindles, we find a consuming capacity in the silk textile industry of 15,600,000 pounds of raw silk; add present consumption by machine twist and sewing silk branch of the industry, 1,700,000; add probable present consumption by other textile industries (not including spun silk yarns)—cotton industry, 500,000; wool industry, 250,000; hosiery and knit goods, 250,000—and we find a total existing capacity for 18,300,000 pounds of raw silk.

To this may be added the consumption of raw silk which does not require to be "thrown" for dress-goods weaves, but which is being used in increasing quantities for raw-silk warps by silk piece goods manufacturers, and by cotton manufacturers as an element of the filling in dress goods woven principally on cotton warps. So-called "weaving in the raw" is decidedly on the increase in the United States, and some experts estimate the quantity so used at the present time as high as 2,500,000 pounds of raw silk.

In the past thirty years the world's supply of raw silk has almost doubled. In 1904-5 China furnished 26.7 per cent of the world's supply of raw silk and the percentage of American consumption was 17.6. Japan furnished 29.8 of the total supply, of which America consumed 46.6 per cent. Italy furnished 25.7 per cent of the crop, and America consumed 25.7 per cent of Italian silk. France furnished 3.3 per cent of the world's supply, and French silk formed 4.5 per cent of American consumption. Other countries furnished the 14.5 per cent remaining, and American consumption of raw silk, other than previously enumerated, was 5.6 per cent.

The increase in broad-power looms shows plainly the trend of productive progress during the past few years. At the beginning of 1906 there was a total of 55,000 power looms, representing an increase of 49.4 in this branch of weaving in five years. The increase of 17,423 looms of the largest productive capacity (36 inches and over) in five years is a noticeable fact. In narrow-fabric weaving there are at present a total of 10,100 power looms. The actual per cent of increase

of high-speed looms in the last five years is 133 per cent. In the throwing branch of this industry the increase has been 23.9 per cent in the last five years. There are now 703,250 first time organzine spindles, 452,779 second time organzine spindles, and 138,769 tram spindles, making a total throwing spindleage of 1,294,798.

ARTIFICIAL FIBER.

REMARKABLE, EVEN REVOLUTIONARY, DISCOVERY.

Consul Robert S. S. Bergh, of Gothenburg, reports the establishment of an artificial silk factory in his district. When it is remembered that Sweden has vast quantities of wood for cullulose and water power in its hills; it will be seen that the textile world will soon have reason to watch the results of this new venture, even if only half of all that is claimed for it should prove true. Consul Bergh writes:

In Gothenburg, or at some place in its neighborhood, will soon be built a large factory for the manufacture of artificial silk for export. A company by the name of Silkesfabriksaktiebolaget has recently been organized here with a capital not to be less than \$160,800 and not to exceed \$482,400, with the purpose of building a factory and exploiting an invention made by Engineer R. W. Strehlenert, of Djursholm, Sweden, for the manufacture of vegetable silk. Excluding experiments, this industry is new in Sweden, and it is claimed that the silk manufactured from nitro-cellulose by Mr. Strehlenert's method has just as fine an appearance and is just as strong or durable as natural silk, or even stronger. It is further stated that the silk has been tested or tried in Swedish and German cloth factories, and that very favorable reports have been received about it.

SWISS MANUFACTURE.

ENORMOUS PRODUCTION OF COUNTRY.

Consul-General Guenther, of Frankfort, supplies figures showing that in 1905 there were 11,915 power looms working on silk goods in Switzerland.

Swiss silk manufacturers had in the same year 11,253 power looms employed in foreign countries in this industrial line. The exports of Swiss silk goods in 1905 aggregated \$22,400,000 in value. Swiss manufacturers note with regret that their exportation of silk goods to the United States has been gradually shrinking, having been reduced to less than \$2,000,000 in value last year, whereas the exports thereto of Swiss embroideries in 1905 were valued at \$6,200,000, an increase of \$1,660,000 over those of 1904. The Frankfort consul-general has in former reports stated that American-made silk goods would obtain a wide market in the world if as energetically and intelligently introduced as are those of France, Switzerland, and Germany.

SILK DYERS COMBINE.

GERMAN MANUFACTURERS AND DYEING CONCERNS DISAGREE.

Consul Thomas R. Wallace, of Crefeld, reports the organization of silk dyers into a union so general that it begins to assume an

international character, and may lead to the silk manufacturers establishing dye works of their own. The consul writes:

The union of silk dyers was organized in July, 47 members signing the agreement, 20 from Crefeld, 10 from Elberfeld, 12 from Barmen, 2 from Ronsdorf, and 3 foreign silk dyers, said to be the largest in the world, Gillett & Fils, Lyon; Färbereien vorm. Joseph Schetty, Söhne, Akt. Ges., Basel; Aug. Weidmann & Co., Talwil near Zurich. The necessity of this union has been urged for some time. The increased cost of raw material and wages for the workmen without the ability to increase the price for dyeing, because of the strong competition, left the dyers without profit, and in many cases, it is claimed, with a loss in the year's business.

The union has sought to overcome these conditions by agreeing upon a fixed price for dyeing and rules for payment. The members are bound under severe penalties, in the agreement, to keep within the price and especially the limit of weighting decided upon. Those customers who have all their goods dyed by the members of the union will be credited with a 15 per cent discount on payment of their bills. Certain clauses state that "The giving of rebates or reimbursements of any form or manner whatsoever which shall amount to the favor of a customer shall be attached with the severest penalties;" and that "The new prices go into effect August 1 and the old prices will be revoked on that date."

The union adopted several other rules to govern their business but of less importance to the general public, also agreeing to take concerted action in advancing and improving the industry.

SILK MANUFACTURERS ACT IN OPPOSITION.

A circular was issued embodying the principal rules adopted, with which the silk manufacturers were unanimously indignant. At a Düsseldorf meeting members of six unions were present, representing manufacturers of silk goods, silk hat bands, umbrella goods, tie, silk, velvet and plush, and the German velvet ribbon convention. A committee was elected to represent the common interests of the several silk-weaving industries and to draw up the conditions for a union. It was further agreed to found a dyehouse of their own, for which 1,000,000 marks (\$238,000) were subscribed, and many of the firms promised further contributions if necessary. It was resolved that the committee should enter into no negotiations with the silk dyers unless the dyers ordered the 15 per cent rule discontinued; further, that the several customers should be placed on the same basis and finally the time for commencement of the new price conditions should be extended.

The union of the silk dyers was before the manufacturers had offered them as a compromise better temporary prices and conditions, but the manufacturers thought the reduction offered was insufficient and the controversy remains unsettled. The comments of the press generally are favorable to the union of the silk dyers and it is believed that the conflicting conditions existing between the silk-weaving manufacturers and the auxiliary industries will eventually produce good results by compelling the silk-weaving industries to organize a union that heretofore has been impossible for them to effect.

It is also said that too little detail has been given to the increased cost of the raw products and labor in the dyeing business, that upon

a clearer comprehension on the part of the silk manufacturers of the necessity for increased prices for dyeing an understanding would have been reached with less friction.

The necessity for the silk-weavers' union is shown by the continuous complaints being made of the unstable prices for their goods, the strong competition between the manufacturers encouraging sales in many cases without profit, and their inability to increase the prices when the conditions require it or the demand for the goods authorizes it.

VELVET AND TIE-SILK COMBINATIONS.

The press alludes to the improved conditions of the velvet manufacturers since the formation of their union and the adoption of rules fixing payment conditions and also prices on part of their products. It seems strange that a similar agreement has not been entered into between the tie-silk manufacturers. Their union adopted rules covering minor questions that have proved a benefit, but have failed to agree upon prices. The production of tie silk at Lyon is of small importance compared with Crefeld and Elberfeld, which provide the largest part of the world with tie silk, and Crefeld largely predominates Elberfeld. The last-named cities are near neighbors, with interests in common, and under the present industrial conditions dominate the markets of the world in tie-silk goods; but the business at best gives but a small profit, and in many cases in the last few years the business has been conducted at a loss. Many weaving firms have quit; others have gone into liquidation.

All agree that the contemplated union would remedy these unfavorable conditions, and it was by far the most important question discussed at their meeting. It is argued also that with the formation of a closer union in the silk-weaving industry an agreement could more readily be reached with the auxiliary industries of dyeing and finishing. The silk manufacturers' proposition to found a dyehouse of their own is looked upon by outsiders as impracticable. It is said such a factory can not be successfully operated to meet the varied requirements of the different members embraced in the attempted union. No agreement has yet been reached between the dyers and manufacturers, nor has the union of the silk manufacturers been effected. One of the largest tie-silk manufacturers refuses to join. It is the same firm which made impossible the founding of an effective tie-silk manufacturers union by the attitude maintained by them at the time of the attempted organization of that industry.

HEMP CROPS.

ITALY.

NAPLES HARVEST—FLUCTUATING MARKET CONDITIONS.

Vice-Consul Homer M. Byington submits a report on the Naples hemp crop, which has just been issued by one of the foremost local exporters:

The sowing of the new hemp crop took place somewhat late this year. The extension was about equal to that of 1905. The eruption

of Vesuvius caused in some districts considerable damage, but in general there was sufficient time to plant the destroyed fields anew, so that the total loss is calculated to be about one-tenth of the entire crop. The ashes of Vesuvius acted as a good fertilizer. During the whole time of the development of this year's hemp frequent and abundant rains prevented the soil from hardening, which greatly favored the growth. The pulling commenced about the middle of July, since when the weather was most propitious for the retting, which is still progressing rapidly, so that until now three-fourths to four-fifths of the entire crop can be considered as secured in best light color. The small parcels of new hemp that have so far come on the market give ground for the best hopes, so that we shall this year see as an average a good quality of hemp, which respecting length, strength, softness, and also color will be superior to what it has been during many years.

With regard to prices no positive previsions are to be made yet. Many mills are unfortunately forced to buy, and pay the prices asked, though with some reluctance, which are about 20 per cent higher than last season. The opinion is, however, prevalent that on account of the large crop in the north Italian hemp districts the buying interest will turn away from Naples and that we shall in later months see more reasonable quotations. For the present a weaker market is rather improbable.

SOUTH AFRICA.

HEMP FROM THE ALOE AND BANANA FIBER.

Consul-General Richard Guenther, of Frankfort, quotes a German publication as follows:

A company was formed at Johannesburg, Transvaal colony, which intends to plant large tracts in Natal with aloe, and to utilize the banana which grows there wild for extracting the fibers from these plants. Some years ago a small company experimented in this line of cultivation and shipped its aloe hemp to London, where it sold from \$100 to \$167 per long ton, according to quality. The costs of cutting the plant and preparing the fiber, transportation charges, etc., to the market in London or Hamburg are calculated to amount to a total of \$54 per ton, thus affording the producer a fine profit.

The company expects to be able to sell next season about 3,000 tons of this aloe hemp. It has entered into contracts with many landholders, according to which the company supplies to the latter the young shoots and receives the preference as a purchaser for the crop. Experiments made for obtaining hemp from the wild banana have been shown to be very profitable. The hemp realized \$100 per ton in London. The company has received the privilege from the Natal government to cut the wild banana on the government land and the reservations of the aborigines. Some of the hemp thus far shipped is of unequal quality and brings a low price, which is attributed to the want of suitable machinery for rending and splitting the leaves, and for preparing the fiber.

FIBER ECONOMIES.

IMPROVEMENT OF PLANT PRODUCTS IN BRITISH INDIA.

A Calcutta report from Consul-General William H. Michael states that Sir David Sassoon, who recently returned from an American tour of investigation, in his address to the Bombay Cotton Association laid considerable stress upon improving the indigenous plants, while at the same time introducing fresh stock. His remarks open the question as to whether India is not giving undue attention to exotics, ignoring the value and capabilities of her indigenous products.

In regard to cotton he pointed out that the cloths in most demand were those woven from country fibers, adding: It behooves those engaged in the weaving industry to devote more attention to the production of such cloth than to the turning out of the finer qualities for which the demand is comparatively limited. As time goes on, and taking into consideration the remarkable success obtained in north-west India in raising lint from Egyptian seed, there is no doubt that the manufacture of the finer fabrics will form a large export trade to such countries where they would be more appreciated than here, but for the present we should keep in view the requirements of the great bulk of consumers.

In regard to fibers in general, there is an inclination to substitute foreign for our own, which latter, if treated by the same methods we accord the former, would in all likelihood prove fully equal for general commercial purposes, though ours may not for some time attain the same perfection claimed for the others.

INDIAN SUBSTITUTE FOR SISAL HEMP.

We have heard a good deal lately of the sisal aloe or agave, but from experiments carried out with the common Indian pine—*ananas*—there seems every probability of these equaling the sisal were the same attention given them. The fresher shoots of the pine yield an excellent filature, but the native weaver who uses them for his rough requirements mixes the ribbons indiscriminately, so that the fine silky threads of new growth become lost in the bulk. The two must be kept distinct, when it is now found we can get from the same plant a lint of the texture of Irish linen, as well as yarns that admit of weaving into sacking or laid up into ropes, from these homely plants that need no cultivation, but merely the thinning out of the clumps in which they are found.

Sisal, on the other hand, has to be trained and special care exercised in selection of leaves for decortication. It takes at least two years ere the leaves can be cut to any appreciable extent, whereas the pines develop in one season. Though the coarser plant may not yield a fiber of the present quoted value of the exotic, the dual products would certainly come up to one-half, but by giving the pines fair play and more elaborate combings the impression is gaining ground that when, as is inevitable, sisal finds its level, as all novelties do, there will be very little to choose between the two.

TEXTILE BY-PRODUCTS MUST BE SAVED.

Again, although an authority has pronounced that our plantain fiber can not come up to the Manila *Musa textilis*, the Madras manipulators have pretty well demonstrated that one species of plantains down in Cochin yields yarns equal to Manila, except in luster, the breaking strain being the same, so that in this practical age we may remain satisfied enough with usefulness, without taking appearances into account.

The stems of the common linseed again afford another instance of how we neglect the by-product of indigenous things. The seeds have been thrashed out and are either left to rot on the ground or burned. Here and there, where a stagnant pool is at hand, small quantities are roughly prepared, the tow teased out and used for calking boats, though these stems if properly treated yield a lint short indeed in staple but capable of being spun and wove into cloth of a very fair texture.

In Bengal, where the yield is greatest, linseed is chiefly cultivated by people on the edges of pools, who, being mostly fishermen or graziers, have no occasion for fine linen. Thus the value of the flax is lost sight of, but with suitable spinning jennies and looms a useful if not very valuable cloth could be furnished, though the local demand would be insignificant. Should it not be able to compete with Manchester or Bombay goods, it undoubtedly would find an outlet as paper material.

In a much lesser degree the stalks of the mustard—not the stunted plant of lower Bengal, but the 5-foot one of the eastern provinces—yield a stout enough yarn, though it is rather brittle, but this may admit of mitigation by batching. Well laid up, it should give a binding twine equal to the *Leptocarpus crenulata*. At present it shares the fate of linseed, yet the demand for string of all kinds, even within the country, is enormous.

LOSSES FROM MANY PLANTS.

We blow away rice dust and meal by the ton, yet both have their value for the chocolate and starch manufacturer. Paddy husks, again, in those localities where coal and petroleum are found in juxtaposition, can be welded with these minerals into those briquettes that are coming once again, after half a century, into request. Large tracts in the Terai of the northern and northeastern mountains teem with giant acacia trees, the gum of which is easily collected and when clarified has no equal, yet we import gum from Europe for use in almost every office. And as for herbs, drugs, essences, and perfumes, the jungles, either in hill or plain, furnish almost every one included in the British Pharmacopœia.

It is not to be denied that there are signs of an awakening in these matters, but the importance of them needs widespread interest. India excelled once in the export of almost everything now imported, and it is high time she should endeavor to regain her lost ascendancy. We have enough and to spare of books and pamphlets upon the soil production of other lands and of their higher economic items. What is needed now is bringing to notice the value of those things which we are rather inclined to suspect are ignored because they are despised as too common for mistaken exalted ideas.

This epitome of the address of Sir David, who is practically familiar with his subject, contains information that will be interesting and valuable to a certain class of American readers.

NEW LINEN PLANT.

BRAZIL'S REMARKABLE DISCOVERY BEING UTILIZED.

Consul-General George E. Anderson, writing again in regard to the new Brazilian linen plant, furnishes additional information confirmatory of what he advanced in a recent report. He writes:

The indications are that whatever merit there is in the new Brazilian linen plant (*Canhamo Brasilensis Perini*), the subject of a report from this consulate-general under date of July 18, 1906, is to be brought to the notice of the world in a very short time, for present promises are that not only has the government of the State of Rio de Janeiro given a large plantation for the experimental and practical culture of the plant, but that it will also give a direct bounty or subvention of 30 30 contos of reis, at present exchange amounting to about \$10,000 American gold, annually for a period of five years in behalf of the enterprise of developing the plant and its manufacture. In his message to the legislative assembly of his State, which has just met, the message being under date of August 1, 1906, Dr. Nilo Peçanha, president of the State and Vice-President-elect of the Republic, spoke favorably of this matter, as follows:

POSITION OF VICE-PRESIDENT OF BRAZIL.

"A new culture under Government auspices, i. e., *Canhamo Brasilensis Perini*, or commonly called Brazilian or Perini flax, will materially add to the state revenues. This recently discovered fiber combines both the qualities of hemp and flax, and its usefulness, until lately, has been altogether unknown. Dr. Victorio Perini first discovered it in its wild state in the forests of San Francisco, at an altitude of about 1,000 meters above the sea level and, having gathered some seeds, planted some and experimented with the product at his plantation near Rodeiro. By this means he was able to domesticate and classify the plant and discover means by which its industrial culture could be perfected, and to study its practical value when used in the manufacture of cloth, cordage, and paper; and for which the Federal Government issued to him on June 29, 1904, patent rights founded upon his useful discoveries.

"Having read the reports of the experiments and having examined the more than satisfactory samples of the manufactured products made in Italy, and before taking any decided steps, I completed my observations by a visit to the plantation originally planted by Doctor Perini. It at once occurred to me that a new culture had been found which might be destined to revolutionize the weaving industry of the world, and an event which marks a new era for our farming industry was taking place. I shall use every means possible to advance the interests of this great coming industry, which has a world-wide market and which seems to be a valuable successor to coffee culture in lands which are now used for the former basis of our state prosperity.

“With this strong conviction I have leased to Doctor Perini and Mr. John Knight the ‘Boa Vista’ plantation, at which there are now being erected the necessary machinery, tanks, and the like for the commercial preparation of the fiber, and for the culture of which modern plows, cultivators, and other implements have already been imported. The above-named planters have agreed to erect a similar factory or establishment at Nictheroy to serve the needs of the planters on the Leopoldina sections.

“To give a vigorous impulse to this new industry, in view of the moderate tariffs, it will be necessary to offer the producers a free market for any quantity. With this explanation I ask the legislative assembly to appropriate a subvention of 30 contos annually for a period of five years for the first factory erected by the above-named planters at Boa Vista for the direct utilizing of the fiber and residue and wood of the valuable plant. The culture now being made at the botanical gardens in Nictheroy will enable the government during the coming year to furnish the planters gratis with a large amount of seed.”

ATTITUDE OF THE BRAZILIAN GOVERNMENT.

As a matter of fact the State government of Rio de Janeiro offered the plantation at Boa Vista to the planters concerned in this enterprise free of charge, so great has its faith in the new plant become, but the planters, fearing the possible results of a change of government, preferred to pay a small rental and thus give legal basis for their hold upon the estate concerned. There is no question, therefore, but that the present state government is very much in earnest in the support it is giving the enterprise to develop the plant. The amount of fiber similar to the European flax which will be put on the market from Brazil this year is uncertain, but it will be considerable, and unless there is some break in the present course of things the amount offered next year will be a very material addition to the world's stock of linen fiber.

INDIA JUTE MILL DIFFICULTIES.

HIGH PRICE OF RAW MATERIAL, BUT HIGHER PRICES PREDICTED.

Consul-General Wm. H. Michael, of Calcutta, reports that the jute mills in India are having a rather hard time as the result of the speculative prices of jute which have prevailed for so many months, and a want of foresight on their part in not laying in a larger supply when prices were reasonable.

One company sustained a loss of over \$20,000 in July, which is a fair indication of the situation. How to tide over and keep the mills in operation is the question uppermost. One mill has shut down altogether, and others are expected to do so very soon. Many are working short time, and one newspaper suggests that a meeting of the Jute Manufacturers' Association should be held at once to devise a concerted measure for curtailing production to such a degree as will have an immediate effect in lowering the price of the raw material to enable the mills to live.

Just how this action will lower prices is not quite clear. The demand for jute in Europe and in the United States will have something to do with keeping up prices, and there seems to be a genuine demand for raw jute in those countries. The demand in the United States for gunnies is heavy and is likely to increase rather than diminish. The consumption of jute per annum in the United States is figured at 600,000 bales, with a probability of large increase; the consumption on the continent is 2,100,000 bales per annum; the consumption in Great Britain per annum is 1,250,000 bales; the mills in Calcutta consume 3,750,000 bales, and the mills in Upper India consume 500,000 bales.

The India mills consumed 4,250,000 bales out of the total consumption throughout the world which is estimated at 8,200,000 bales, or a little more than half of the raw products.

COTTON SEED.

EXPORTS OF ITS PRODUCTS—LARGE AND INCREASING DEMAND.

The value of raw-cotton exports is so great that exports of cotton-seed products are to a large degree overlooked, and yet the exports thereof during the year ended June 30, 1906, amounted to \$31,169,300, viz: Cotton-seed oil, \$13,673,400; cotton-seed oil cake, \$13,073,400; lard substitutes (cottolene, etc.), \$4,154,200; cotton seed, \$268,300. To enable cotton producers and cotton-seed product manufacturers to appreciate in all its details the full value of this trade, the following table, showing the exports for the ten years ended June 30, 1906, has been prepared:

Year.	The oil.	Oil cake.	Cottolene, etc.	Cotton seed.	Total.
1897.....	\$6,897,400	\$5,515,800	\$857,700	\$170,600	\$13,441,500
1898.....	10,137,600	8,010,700	1,118,600	197,200	19,464,100
1899.....	12,077,500	9,253,400	1,200,300	197,000	22,728,200
1900.....	14,127,500	11,229,900	1,475,100	346,200	27,178,700
1901.....	16,541,800	13,119,200	1,449,900	366,900	31,477,300
1902.....	12,932,400	12,271,000	2,687,700	509,600	28,400,700
1903.....	14,211,200	12,732,500	3,607,500	532,700	31,083,900
1904.....	10,717,800	9,134,100	3,581,800	141,200	23,574,400
1905.....	15,125,800	13,897,200	3,613,200	235,800	32,872,000
1906.....	13,673,400	13,073,400	4,154,200	268,300	31,169,300

The exports of cotton-seed products in 1906 were two and one-half times greater than in 1897. Any variation in the steady increase of the trade has been wholly due to the amounts available for export, not to any variation in demand, for Europe stands ready to take all that the United States can produce, leaving all other continents out of consideration.

COUNTRIES THAT BUY COTTON-SEED PRODUCTS.

The following table shows the countries to which the several products were exported in 1897, 1898, 1903, 1904, and 1905, full details of

the trade for 1906 not being at hand at the time of the preparation of the table:

Whither exported.	1897.	1898.	1903.	1904.	1905.
COTTON-SEED OIL.					
Netherlands.....	\$1,470,100	\$1,494,700	\$3,772,500	\$2,108,400	\$4,089,600
France	2,601,500	3,617,100	2,594,000	2,115,400	2,671,900
Italy	209,700	1,012,700	811,400	547,100	1,669,300
Germany.....	430,500	630,300	1,293,400	1,062,700	1,473,400
Austria-Hungary.....	619,700	1,168,300	1,460,800	966,500	1,365,500
United Kingdom.....	294,600	629,700	814,900	804,100	908,900
Mexico.....	320,500	328,800	1,068,300	1,177,000	692,800
Belgium.....	121,400	163,400	141,400	251,400	496,900
West Indies	209,500	226,700	432,300	408,400	378,200
Canada.....	62,200	115,600	359,600	216,900	233,700
Brazil	173,800	237,100	829,700	348,800	191,000
French Africa.....	119,800	193,100	125,900	36,800	165,000
Denmark.....	22,000	71,800	813,800	251,400	103,900
Sweden.....	18,200	55,500	93,900	59,700	87,700
Uruguay.....	51,900	71,600	110,100	96,900	81,700
Egypt	19,000	34,100	76,600	10,200	76,100
Norway	(a)	(a)	69,600	90,700	52,200
Argentina.....	11,600	5,900	18,600	69,600	40,000
All other countries.....	141,400	81,700	324,400	95,300	348,000
Total	6,897,400	10,137,600	14,211,200	10,717,300	15,125,800
OIL CAKE.					
Germany.....	2,657,800	3,594,200	4,034,700	3,803,500	5,436,800
Denmark.....	482,800	1,371,300	4,062,700	2,422,700	4,514,300
United Kingdom.....	1,414,200	1,865,700	2,381,100	1,894,700	2,375,800
Netherlands.....	600,000	752,600	1,546,300	685,400	918,300
Belgium.....	241,600	267,600	583,800	192,900	361,300
All other countries.....	119,400	189,300	123,900	134,900	290,700
Total	5,515,800	8,040,700	12,732,500	9,134,100	13,897,200
COTTOLINE, ETC.					
Cuba	10,700	10,500	1,060,500	1,351,100	1,234,700
United Kingdom.....	232,100	356,200	1,141,300	765,100	669,100
Germany.....	226,500	318,600	321,000	477,800	536,400
Netherlands.....	11,100	174,300	174,200	293,000	241,200
British India.....	.....	.....	44,400	58,300	240,300
Mexico.....	19,800	26,800	100,000	162,900	217,300
Belgium.....	39,100	25,400	114,700	40,400	79,400
Denmark.....	50,100	62,900	127,300	63,100	78,300
All other countries.....	268,300	144,000	524,100	870,100	316,500
Total	857,700	1,118,700	3,607,500	3,581,800	3,613,200

a Entered with Sweden.

The export of cotton seed is so small, as compared with any of its products, that it is not necessary to tabulate it. Of the export in 1905, \$235,800 worth, or nearly all, went to Germany (\$74,900), Mexico (\$60,000), United Kingdom (\$59,000), and the Netherlands (\$37,000).

SALES BEGAN IN 1870.

The first recorded export of cotton-seed oil was in 1870, valued at \$14,946. At that time the proposed uses for this oil or for cottolene were not well defined. The use of hog's lard for all culinary purposes had seemingly become so prejudicially fixed that no one thought of introducing cotton-seed oil or cottolene as substitutes therefor. Nothing is harder to introduce than new food products, and the people of the United States, who are always anxious to accept newer and better things in all other lines, are as fixed in this respect as are the people of the Old World; but the export of cotton-seed oil jumping from \$14,946 in 1870 to \$2,514,300 in 1878, showed that Europe had

found uses therefor; the olive-oil producers finding that cotton-seed oil was peculiarly adapted to mixing with olive oil, hence the increased export.

The American consul at Naples (Mr. Duncan) reported as follows in 1880: "Cotton-seed oil has already found its way into the remotest valleys, whose sole product is olive oil, where it is mixed with the latter and the combination is sold as pure olive oil. The resemblance is so great that even the most expert can not detect the mixture."

Another consular report, written about that time, stated that the wholesale dealers in olive oil guaranteed their product as absolutely pure, being sold by them as received from the peasant producers. It was afterwards discovered that the "peasant producers" imported our cotton-seed oil and mixed it with their olive oil—one-third cotton-seed oil and two-thirds olive oil—and passed it as pure on the wholesalers, whose experts failed to detect the imposition.

Then the question assumed national importance, for if the cotton-seed oil had such "affinity" for the olive oil as to pass the most expert connoisseurs when properly mixed the whole olive-oil industry of Italy seemed menaced. The Government therefore sought, by a "prohibitory tax," to exclude the imports of the oil. But the "prohibitory tax" has had, seemingly, no effect whatever, for the imports of cotton-seed oil into Italy in 1905 were many times greater than in 1880. The same is true of the other olive-oil producing countries.

The largest export of cotton-seed oil is to the Netherlands (\$4,089,600 in 1905), where it is doubtless used in the manufacture of artificial butter and margarine, of which the United Kingdom purchased about \$13,000,000 worth in 1905. All this is not intended to find fault with the Old World for its uses of our cotton-seed oil for mixing and manufacturing (it is the very purest and most wholesome product for such purposes), but to draw the attention of American consumers thereto. Undoubtedly a large proportion of the olive oil imported into the United States is composed of that cotton-seed oil, which the American people refuse to consume in its honest form, but consume when imported under the several well-known brands of the Old World's famous olive oils.

A NEGLECTED OPPORTUNITY.

If the United States had, twenty or twenty-five years ago, followed up the admissions of European olive oil experts, that they could not detect one-third cotton-seed oil in their best olive oil and pushed the matter to its just conclusion, viz: That cotton-seed oil was as pure and wholesome—although in itself lacking the peculiar flavor of olive oil—as the best olive oil, the United States would not to-day be able to meet the foreign demand which would have been created therefor. Even now an official analysis of the oil and a Government assurance of its purity and wholesomeness for culinary and table uses would not only enlarge its foreign market, but would break down home prejudice against it and its product—cottolene—and very much enlarge its consumption in the United States.

Attention is especially called to the opportunities which exist in Mohammedan countries, where the use of pork lard is wholly forbidden, for enlarged trade in cotton-seed oil and cottolene. With a government guarantee that no pork fat of any sort entered into these

products, but that they were wholly vegetable, a very large trade could be built up.

The fact that Germany, Denmark, and the United Kingdom import over \$12,000,000 worth of United States cotton-seed oil cake is evidence enough as to its worth, for they are the expert cattle feeders of the world.

COTTON IN KOREA.

FAVORABLE REPORT OF A JAPANESE EXPERT TO A BRITISH ASSOCIATION.

Mr. Ando, a Japanese expert, was commissioned by the Association of Cotton Growers of England to make experiments in cotton culture in Korea, and his report was recently issued from the British foreign office. He says that in spite of the excessive rains in 1905 the Korean cotton crop did not average more than 60 to 70 per cent of a normal season, yet the experiment in Mokpo was remarkably favorable, the crop being double that of previous crops in the locality.

Unfavorable results in other places he ascribes to lack of supervision. He considers the prospects very promising, and that if cultivation is extended throughout the country it will be of great value to the spinning industry in Japan.

The general results of cultivation in Mokpo, where an agricultural expert was in charge, and at five places under Japanese farmers, he summarizes in this way: Upland cotton he thinks admirably adapted to the climate and soil in Korea. In Japan the excess of rain at the season of the bursting of the pod causes a certain amount of rot to set in, consequently reducing the yield, but in Korea the weather at this season is dry, thus insuring a safe crop. He thinks that while it is difficult at present to calculate the expense of growing manured cotton, a clear profit should be left of £2 2s. 8d. (\$10.32. Accurate) figures are difficult to attain, but he puts the area under cotton at 298,200 acres. This is about 4.5 per cent of the total cultivated area of the country. The average crop seems to run from 427 pounds to 215 pounds. Estimating the population of Korea at 14,000,000, and taking the consumption of cotton at 3½ pounds ginned cotton per head per annum, he finds 46,000,000 pounds used in the country. The import of ginned cotton and cotton wool, on a four years' average, is 1,428,000 pounds, the import of manufactured cotton is 18,850,000 pounds, while Korea exports 1,140,000 pounds. This shows the net amount of ginned cotton produced in Korea to be 26,862,000 pounds.

The experiments at Mokpo tend to show that the introduction of upland cotton throughout the country would increase the output of ginned cotton by some 18,000,000 to 20,000,000 pounds.

TARIFFS.

CHANGING WORLD SYSTEMS.

BRAZIL.

THE 20 PER CENT REDUCTION—PRODUCTS FROM THE UNITED STATES UNDER A SERIOUS HANDICAP.

The 20 per cent tariff reduction made by Brazil on certain importations from the United States, to remain in effect until December 31, will not overcome the disadvantages under which American wheat and flour now rest, nor will it influence the trade in some other articles, as shown by a report from Mr. N. I. Stone, of the Bureau of Manufactures, who, while in attendance at the Pan-American Conference in Brazil, took occasion to look into the matter. Mr. Stone says:

It is the unanimous testimony of flour dealers in Rio that American flour is far superior to Argentine flour, as well as Brazilian flour made of Argentine wheat. Numerous tests made in Rio have proved not only its superior bread-making qualities, but also the fact that from a given weight of American flour a great deal more bread is obtained than from an equal weight of Argentine flour. If the two flours could enter the market on equal terms there is no question but that most, if not all, of the bakers would prefer to use American flour, and in fact would be willing to pay a somewhat higher price for it than they do for the Argentine product, yet the sale of North American flour in the Brazilian markets is constantly decreasing owing to the great advantage the Argentine and Uruguayan flour have as regards the cost of transportation, as will be seen from the figures given herewith. [Kilo = 2.20 pounds; milreis, gold = .546 cents; milreis, paper = 33½ cents.]

The importation of American flour into Brazil has declined from over 50,000,000 kilos in 1901 to about 20,000,000 kilos, or to less than one-half of the original quantity in 1905, while the importation of Argentine and Uruguayan flour exceeded 140,000,000 kilos in the latter year. During the same five-year period the importation of Argentine and Uruguayan wheat increased from 114,000,000 kilos to 214,000,000, or about 88 per cent. In the first six months of the present year the importation of American flour into Rio de Janeiro was 776,166 kilos. During the same period the importation of wheat from Argentine and Uruguay was 54,084,940 kilos. As Rio imports about one-half of the total flour imports of Brazil, these figures are very significant of the further decline in the importation of American flour.

It is, further, the unanimous testimony of flour dealers in Rio that unless the United States imports of flour are given some advantage to counteract the disparity in freight rates, the importation of flour from

the United States will cease altogether within a year. That the reduction of 20 per cent, recently granted and at present in force, in favor of United States flour is not sufficient to counteract the advantage in freight rates enjoyed by Argentine and Uruguay will be seen from the table given herewith. During eight months of 1904 the United States flour enjoyed the 20 per cent reduction of duty, yet the imports of American flour into Brazil declined from nearly 39,000,000 kilos in 1903 to a little over 30,000,000 kilos in 1904.

Imports from the United States into Brazil on which the Brazilian Government granted a reduction.

Articles.	1903.		1904.		1905.	
	Value in paper mil-reis.	Equivalent in dollars.	Value in paper mil-reis.	Equivalent in dollars.	Value in paper mil-reis.	Equivalent in dollars.
Wheat flour ^{a b}	9,432,723	\$2,277,484	8,993,598	\$2,202,680	4,782,177	\$1,519,656
Condensed milk ^{a b}	3,061	739	185,439	45,417	185,673	59,002
Rubber goods ^{a b}	150,776	36,404	156,639	38,363	127,842	40,625
Watches and clocks ^{a b}	218,911	52,885	334,119	81,831	251,998	80,079
Paints and varnishes ^{a b}	151,293	36,529	208,058	50,957	149,484	47,502
Typewriters ^b	52,770	12,741	110,543	27,074	155,080	29,281
Pianos ^b	12,435	3,002	39,906	9,774	30,252	9,618
Scales ^b	75,507	18,231	92,541	22,665	88,143	28,010

^a Twenty per cent reduction of duty in force April 20–December 31, 1904.

^b Twenty per cent reduction of duty July 1–December 31, 1906.

ADVANTAGE ENJOYED BY ARGENTINA AND URUGUAY.

The freight rate from New York to Rio on a barrel of flour is about a dollar United States currency, or 3 milreis, and the freight on an equal amount of flour from Buenos Aires to Rio is only 700 reis, making a difference of freight in favor of Argentina and Uruguay of 2\$300 (2 milreis and 300 reis). The duty on 100 kilos of Argentine flour is 3\$750. Under the 20 per cent reduction of duty, 100 kilos of American flour is subject to a duty of 3\$205, the difference in favor of American flour being 545 reis, or call it in round numbers 500 reis. Thus as against a tariff advantage of 500 reis the United States flour is confronted with an advantage of 2\$300 enjoyed by its competitors as regards freight. It is apparent, therefore, that unless this amount can be saved in duty the United States flour will not be able to meet the competition of its Argentine and Uruguayan rivals. If American flour were to enjoy a reduction in duty of 50 per cent, the difference in duty on a barrel of flour would only amount to about a milreis and a quarter, and would still be only about one-half the difference in freights paid by Argentine and United States flour respectively. However, it is the belief of competent flour dealers in Rio that the United States flour would be able to overcome this disadvantage on account of its superior qualities.

Another matter of administrative detail should be called attention to, which, if left alone, will continue to rob the United States imports of half of the 20 per cent reduction. This is due to the method of levying the port tax on all imports. The tax is 2 per cent in gold on the official valuation of the imports, and no reduction of duty is granted on that item. A practical illustration taken from the books of one of the flour dealers in Rio will show how this operates. The importation in question was of 2,000 bags, equal to 1,000 barrels, equal to

88,000 kilos of flour. The duty at 25 reis a kilo equals 2,200\$000, of which 35 per cent is payable in gold and 65 per cent in paper. The port tax of 2 per cent gold is levied on the official valuation, and the official valuation is always 10 times the amount of the duty. In the present case the official valuation was therefore 22,000\$000, yet the invoice value of that importation was £908.68, which at the current rate of exchange, 16½d. per milreis, was equal to 12,942\$486. The difference between the official valuation and the real value was, thus, 9,058\$000, and the excess of the port tax on that official valuation was 180\$000 gold, or about 275\$000 paper, in round numbers. As the total duty on that importation, after converting the 35 per cent of gold into paper, and exclusive of the port tax, was 2,673\$000, the 20 per cent reduction in favor of the United States flour amounted to 535\$000, which, after deducting the excess charges on account of the port tax of 275\$000, left a real reduction only about one-half of what it should be on a 20 per cent basis.

The United States is justified in asking for at least a 50 per cent reduction of duty on flour, as any reduction less than that is absolutely illusory and of no value whatever and might as well be dispensed with, so as not to give the Brazilian Government the excuse that they are giving us something in return for the free admission of coffee into the United States.

COMPETITION WITH BRAZILIAN FLOUR.

A new and growing competitor is found in the so-called Brazilian flour, which is flour ground in English mills built in Brazil and mostly of wheat grown in Argentina and Uruguay. The *Jornal do Commercio* on January 1, 1903, in giving an account of the operations of the Rio de Janeiro Flour Mills and Granary Company (Limited), gave the following figures as to the dividends paid by this company: 1895-96, 14s., or 10 per cent; 1896-97, 16s.; 1897-98 and 1898-99, 12s.; 1899-1900, 21s., or about 15 per cent; 1900-1901, 21s., and 1901-2, 30s., or about 21½ per cent. In addition to that, a bonus was distributed among the stockholders, which raised the total distribution of profits to £4 10s. for each share of a nominal value of £7, or a total of 64 per cent. These profits are due in a large measure to the high degree of protection enjoyed by the English mills operating in Brazil. The following figures will bring out this point: The duty on flour is 25 reis per kilo, that on wheat is 10 reis per kilo. After allowing for port taxes and the payment of 35 per cent of the duty in gold, we get the following differential in favor of local flour mills, estimated on the basis of 100 kilos:

100 kilos of flour, at 25 reis a kilo, pay a duty of.....	3\$750
100 kilos of wheat, at 10 reis per kilo, pay a duty of.....	1\$525

Difference in favor of flour	2\$225
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Under the 20 per cent reduction in favor of American flour the differential in favor of the local flour mills would be 1\$680. To this should be added about 3\$150 for freight. To enable the American flour to enter the Rio market in competition with the local mills it will be necessary to reduce this advantage to a minimum. This could be done in either of two ways—reducing the duty on flour or raising the duty on wheat. In view of the needed revenue of the Brazilian treasury and of the great desire to further the cultivation of wheat in the

southern States of Brazil, a movement in favor of the raising of duties on wheat has better promises of success than that of favoring a reduction of the rate of duty on flour.

A move is being made by some of the local flour dealers to secure an increase of the duty on wheat to 25 reis, or at least 20 reis per kilo. It is apparent that this would be of great advantage to the United States, and, while it would tend to reduce the dividends of the English mills in Rio de Janeiro, it would undoubtedly be ultimately of great advantage to Brazil, as it would make her independent in the end of Argentine wheat.

REDUCTION OF DUTY GRANTED AMERICAN PRODUCTS.

The 20 per cent reduction of duty on certain articles imported from the United States would have amounted to about 250,000 milreis if it were in force in the year 1905. During the fiscal year ending June 30, 1905, the United States imported over 800,000,000 pounds of coffee from Brazil. If a duty of 5 cents a pound were to be levied on coffee, which is a moderate assumption compared with the duty on coffee prevailing in France and some other countries, the United States Treasury would have received over \$40,000,000 in gold, or over 120,000,000 milreis. These two figures put side by side, 120,000,000 milreis given up by the United States Treasury on Brazilian coffee alone, not to speak of the imports of rubber and other Brazilian products admitted free of duty, and on the other hand the paltry sum of 250,000 milreis, representing the reduction of duty granted by Brazil to the United States, are sufficiently striking to show the inequality of advantages enjoyed by the producers of the respective countries in each other's markets.

While it may be said that the absence of a duty on rubber in the United States is actuated by its own interests, as it is required in the production of manufactured rubber goods, the same can not be said in the case of coffee; the 5 cents duty on coffee mentioned above is not an impossibility if certain existing conditions be taken into account. Both the people and the Government of the United States are naturally anxious to do all in their power to favor the people of their newly acquired territories, such as Porto Rico, the Hawaiian Islands, and the Philippine Islands. Porto Rico, which enjoyed a flourishing trade in coffee under the Spanish dominion, has now seen its European markets taken away from it and, on the other hand, has not gained any advantage in the United States markets, owing to the free admission of Brazilian coffee in that country. As a result the Porto Rican coffee planters are in a pitiable condition, and the exports of Porto Rican coffee have dwindled down to about a million and a quarter pounds in the United States and 15,000,000 pounds to foreign countries in 1905, which is less than one-half of what they were a year before.

The people of Porto Rico are naturally dissatisfied and are clamoring for protection to one of their principal productions. The refusal on the part of Brazil to reciprocate in a substantial manner the advantages granted by the United States to its principal products, of which the United States takes more than one-half and in some cases as much as three-quarters of the entire Brazilian shipments, is apt to make the movement for the imposition of a duty on coffee irresistible; the more so that in addition to Porto Rico both the Hawaiian and the Philippine Islands have large areas well suited for the cultivation of coffee if the United States were to protect them by a duty on foreign coffee.

SMALL EFFECT OF THE 20 PER CENT REDUCTION.

The reduction of 20 per cent of duty, which went into effect on July 1 of this year, is in some cases not sufficient to influence the trade in any way. This has been shown more fully in the case of flour. The same conditions apply to the other products. Thus as regards typewriters, the duty being 30 milreis a piece, a reduction of 20 per cent amounts to a saving of 6 milreis, or a little over \$2 United States currency, after allowing for the 35 per cent payment in gold. As the price of typewriters sold in Rio is from 460 to 450 milreis the reduction is about $1\frac{1}{2}$ per cent ad valorem, which is not sufficient to affect the price of the typewriters in any way. Likewise in the case of windmills, the duty being 15 per cent ad valorem, the 20 per cent reduction of duty amounts to only 3 per cent ad valorem. It is respectfully suggested that the 20 per cent reduction of duty on condensed milk, which comes under tariff heading No. 58, be also extended to malted milk, which is classed under *farinha lactea* (lacteous flour).

If the reduction of duty on the above articles were to be made 50 per cent it would be more likely to give some advantage to the United States imports as against European products, without any loss to the Brazilian treasury, since the lower rate would probably result in much larger imports and thereby increase the total revenue derived from that source by the Treasury. As, with the exception of wheat, none of these articles are produced in Brazil, the proposed reduction of duty would not in any way interfere with the protective policy of the Brazilian Government. In addition to this there is a large variety of products in which the United States could, with advantage both to its own and the Brazilian people, increase its trade with Brazil if the duties at present in force were to be materially reduced, say 50 per cent. Among these are the various iron and steel products enumerated in the tariff from Nos. 704 to 758. While the duty is nominally 50 per cent ad valorem, it is in some cases prohibitive after due allowance is made for the part payable in gold, port charges, etc. An illustration of this is steel safes, which are not produced in Brazil, and in which the United States has no superior. To import a large safe from the United States it would cost about \$500 gold in duties. Other iron and steel products are covered in the tariff by Nos. 793 to 798, and machines, implements, and tools of all kinds by Nos. 980 to 1026. A reduction of duty on these goods, such as electrical machinery and appliances, printing presses, pumps and pumping machinery, locomotives and steam engines, agricultural machinery, sewing machines, structural iron and steel, wire, nails, spikes, etc., would, as suggested above, hardly interfere with the existing industries of Brazil, and, on the other hand, would benefit not only the Brazilian consumer, but a great body of producers who need these articles in their establishment.

HIGH DUTIES ON BOOTS AND SHOES, ETC.

The duty on leather shoes, tariff No. 30, amounts to from 60 to 200 per cent ad valorem, according to United States prices, and, being the same for shoes of all qualities, is especially burdensome on the cheaper grades, such as the bulk of the Brazilian people could import with advantage from the United States. In the production of shoes the United States leads the world, and with the duty reduced to enable

the importation of the cheaper grades, a considerable trade could be built up.

The duty on furniture amounts to 50 per cent ad valorem, although, allowing for the various charges and gold conversion, it really exceeds that figure a great deal. A reduction of duty on furniture, especially office and store furniture and fixtures, in which the United States has no equal and hardly any competitors in Brazil, would make it possible for the Brazilian business men to equip their establishments in a way that would be conducive to their comfort and a great saving of labor, and would add a new source of revenue to the Brazilian treasury without interfering with home industries.

Other articles which would be of great use to the Brazilian consumer without interfering with Brazilian products, and in which the United States excels the world, are canned meats, fruits, vegetables, and fish (conservas, extractos de carne, fructas, legumes e peixe).

The duty on grape juice, which is imported exclusively from the United States, was increased 50 per cent on January 1, 1906, from 300 reis to 456 reis per kilogram, and is proving a serious handicap in the expansion of the market for this useful beverage.

A matter which interferes seriously with the efforts of American manufacturers to extend their trade with Brazil is the treatment of advertising matter. While catalogues are admitted at the rate of 300 reis per kilogram, illustrated cards or signs, which belong to the same class, are assessed at from 3 to 7 milreis per kilogram, which is practically a prohibitive rate. Samples introduced to the country only for the purpose of serving as such, and not for sale, should be admitted free of duty, which is in accord with the modern practice throughout the world.

The charges for custom-house storage (armazenagem) are so high that, according to the statements of importers in Rio, goods left there for six months or over can not be gotten out, since the storage charges by that time exceed the value of the goods, the storage charges increasing in geometrical ratio each month.

IMPORTANT INCREASES ON FOOD STUFFS.

Consul-General G. E. Anderson reports from Rio de Janeiro that among the amendments to the present tariff on meat products which have just been passed by the House of Deputies of Brazil may be noted an increase in the duty on ham to 1 milreis 300 reis, or about 44 cents gold per kilo; on margarine butter the duty has been increased to \$1.55 per kilo; on soap grease from $3\frac{1}{2}$ to $4\frac{1}{4}$ cents per kilo; on jerked beef from $4\frac{1}{2}$ to $6\frac{1}{4}$ cents per kilo; on stearin from 26 to 34 cents per kilo. There is no doubt but that these amendments will be approved by other branches of the Government.

VENEZUELA.

EARTHENWARE RECLASSIFIED—WOVEN WIRE MADE FREE.

Consul James W. Johnson transmits from Puerto Cabello translations of new Venezuelan regulations modifying the tariff, as follows:

There shall be only two classifications in imported earthenware; first, fine porcelain, china, severes ware, etc., in any form not speci-

fied shall be in the fourth class of the tariff; second, common earthenware, glazed or not, and other classes not embraced in the preceding paragraph, in any form not specified, shall be in the third class of the tariff.

Woven wire, designed for fences for animals and as a protection to agriculture and flocks, is ordered to be cleared free of duty, like barbed wire.

CANADA.

UNITED KINGDOM NOT IN FAVOR OF RECIPROCATING BY IMPOSING DUTIES.

There are reports from Canada that at the coming session of Parliament in November some change will be made in the preferential tariff, which now favors the United Kingdom and its colonies. As no return has been given to Canada for these preferential rates it is proposed to limit them.

The opinion in Great Britain does not appear to favor preferential trade within the Empire by the imposition of tariff duties as proposed by Mr. Chamberlain and his following. A conference of delegates from the chambers of commerce of the United Kingdom was recently held at Bristol, England. A resolution was adopted "welcoming the gathering of an imperial conference for the official and responsible consideration of increased imperial trade," but refusing to recommend a departure from free trade. The resolution as adopted reads as follows:

That while in warm sympathy with the desire for larger imperial trade this meeting can not recommend a departure from the home policy of free trade in the absence of practical proposals, but would welcome the gathering of an imperial conference for the official and responsible consideration of the matter.

NEWFOUNDLAND.

DUTY ON WHEELS CUT DOWN.

The governor of Newfoundland has issued an act reducing the customs duty on "wheels, ready-made or part-made—that is, with spokes in hubs," from \$4 per two wheels and 20 per cent ad valorem to \$1 per wheel and 20 per cent ad valorem.

AUSTRALIA.

PROPOSED DUTIES ON AGRICULTURAL MACHINERY.

Consul-General John P. Bray, of Melbourne, reports that in the Australian House of Representatives on August 10, the minister of customs gave notice of new duties it is proposed to levy in connection with agricultural machinery and implements, and moved the following resolution, which was adopted by that body:

"That from August 10, 1906, the following additional duties shall be imposed: Stripper harvesters, stump-jump plows, strippers, disk, cultivators, winnowers, horse or other power, 12½ per cent. Plows, other plowshares, harrows, chaff cutters, and horse gear, cultivators

other than disk, scarifiers, malleable and other castings for agricultural implements, $7\frac{1}{2}$ per cent."

The following duties of customs shall be imposed on the following goods: Combined corn sheller, husker, and bagger, and combined corn sheller and husker (now free), 25 per cent; corn shellers and corn huskers (now free), 20 per cent; plow mold boards (now free), 20 per cent.

The following goods shall be free of customs duty: Hand-worked rakes and plows combined, hay tedders, maize harvesters, maize binders, maize planters, mold-board plates in the rough and not cut into shape, potato sorters, and potato raisers or diggers.

The additional duty of $12\frac{1}{2}$ per cent proposed on stripper harvesters, stump-jump plows, strippers, disk cultivators, and winnowers bring the total duty on each implement to 25 per cent. The additional duties of $7\frac{1}{2}$ per cent on plows, other plowshares, harrows, cultivators, chaff cutters, scarifiers, malleable castings, etc., brings the total duty to 20 per cent.

As stated, the new duties are collectible from August 10, 1906, and were recommended in a report by the tariff commission now sitting, which has not yet been made public. The sudden action by the Government in the matter was a complete surprise to the business community, and, it was explained by the minister, was necessary in order to protect the revenue, as the recommendations of the tariff commission in its report to the Government had in some manner leaked out, and it was feared large clearances at the customs would be made.

PROPOSED CHANGE TO SPECIFIC DUTY.

According to a London Times dispatch from Melbourne, in the Federal House of Representatives, on August 28, Sir William Lyne, minister of trade and customs, moved a resolution in favor of the substitution of specific duties of £16 and £8, respectively, on stripper harvesters and strippers for the ad valorem duty of 25 per cent.

AMOUNT OF TRADE WITH SOUTH AFRICA.

According to a report from Consul-General John P. Bray the proposals of the Australian Government for adopting a preferential arrangement with South Africa, in order to secure the benefit of the tariff rebate provided by the South African Customs Union are to be brought before Parliament at an early date. The following statement shows the value of exports from Australia to South Africa (not including gold specie) for the last five years:

Year.	Cape Colony.	Natal.	Total.	Year.	Cape Colony.	Natal.	Total.
1905	\$6,243,447	\$4,307,465	\$10,550,912	1902....	\$6,965,152	\$7,727,033	\$14,692,185
1904	6,816,273	3,319,395	10,135,668	1901....	9,553,344	7,399,679	16,953,023
1903	4,715,609	3,788,118	8,503,727				

Out of the total of \$10,550,912, in 1905, wheat accounted for \$3,313,726; flour, \$1,511,229; meats, \$2,589,173; butter, \$1,060,966, and lumber \$754,842.

LEGISLATIVE POSITION AND AGREEMENTS.

The London Times publishes the following from Sydney, Australia:

The Federal Government is not inclined to grant preference by lowering duties so long as Great Britain refuses reciprocity. When, however, a mutual system of preference is brought about between the mother country and the Commonwealth, a decrease in various Australian duties can be arranged. The present preferences are chiefly on imports which have shown an increase recently in German and United States trade, such as furniture, wood manufactures, arms, and explosives.

The agreement for a preferential tariff between Australia and New Zealand provides for mutual preferences on foodstuffs and timber, New Zealand's oats balancing the Commonwealth's fruit and sugar.

The preferential arrangement with South Africa will follow as soon as replies have been received from South Africa.

NETHERLANDS.

DUTCH REVISION OF IMPORT REQUIREMENTS.

Mr. David J. Hill, American minister at the Hague, forwards a translated copy of the Netherlands law of July 9, 1906, revising the law of April, 1895, containing further provisions relating to the levying of import duties, ad valorem, on merchandise. Its provisions read:

ARTICLE 1.

Article 1 of the 1905 law shall read as follows: Whenever at the inspection of merchandise subject to ad valorem import duty, the officials charged with that inspection are of opinion, that the declared value of the whole contingent, or of one or more portions of it, whereof a separate amount is mentioned in the declaration, is too low, they shall give notice thereof, in writing, if desired, to the person making the declaration, or in his absence, to the person who offers the merchandise for inspection.

For such merchandise they may fix a higher value, which shall be notified to the person making the declaration by placing at his disposal a statement—at the office of the collector at whose office the declaration was made. Such deposit shall be made not sooner than twenty-four and not later than forty-eight hours after the aforementioned notification, Sundays excepted. The inspector of import duties or his deputy, at the written request of the person making the declaration, may lengthen those periods by a period not to exceed six times twenty-four hours, and also shorten the first-mentioned period.

So long as the statement of the officials is not deposited, the person making the declaration may increase the value declared to an amount considered sufficient by the inspector or his deputy; the offer thereto being made in writing and in duplicate. One copy thereof shall be returned to the person making the declaration, after the decision relating thereto has been entered.

If, before the deposit of the statement is made, it should appear to the official that the value has not been stated at too low a figure, the inspector or his deputy may authorize that the merchandise be immediately placed at the disposal of the person making the declaration.

ARTICLE 2.

In article 2, instead of "director of import duties," "inspector or his deputy" shall be inserted and the words "annul the confiscation" shall be omitted. In clause 1 of article 3, the words, "with the confiscation of" shall be omitted, and instead of "director," "inspector or his deputy" shall be inserted. The second clause of that article shall be omitted. The last clause of that article shall read: "They may fix the value at a different amount from that decided on by the officials or by the inspector or his deputy." In the first clause of article 4, instead of "director," "chairman of the committee" shall be inserted. The second clause of this article shall be omitted.

ARTICLE 3.

The heading above article 5 shall be omitted, and said article shall be superseded by a new article 5, reading as follows: "In case the amount of the declared value is increased, in accordance with the last paragraph but one of article 1, then, in addi-

tion to the import duty on the sum to which the declared value has been brought, the person making the declaration shall pay an increased duty of five times the import duty, estimated on the difference between the last-mentioned sum and the original declared value."

Article 6 shall be superseded by a new article 6, reading: "In addition to the ad valorem duty fixed by the acting customs officers, the inspector or his deputy, the committee, or the council the person making the declaration shall pay ten times the import duty estimated on the difference between that value and the value originally declared."

ARTICLE 4.

Article 7 shall be superseded by a new article 7, reading: "If, in the case mentioned in the last paragraph but one of article 1, increase of the declared value is offered to an amount which is not considered sufficient by the inspector or his deputy, and, notwithstanding the value is finally decided to be at or below that amount, in that case the person making the declaration shall pay, in addition to the duty on the thus fixed value only five times the duty estimated on the difference between that value and the originally declared value."

ARTICLE 5.

In the first paragraph of article 8 the words "before him" shall be superseded by "before him or his representative."

ARTICLE 6.

Article 9 shall read as follows: "If it appears, in making the inventory, that the description of merchandise is incorrect, the provisions of this law also are not applicable and article 213 of the general law of August 26, 1822, shall take effect.

"If before or subsequent to the deposit of the statement mentioned in article 1 it appears that a portion of the merchandise has not been declared, in that case articles 214 and 215 of the afore-mentioned general law are not applicable, but—without detriment to the additional payment in accordance with articles 6 and 7—on account of silence respecting that portion a payment of twice the import duty shall be made, estimated at the difference between the definitely fixed value of the merchandise found and the originally declared value.

"The finding of a larger or smaller quantity, when the officials have deposited the statement mentioned in article 1, shall result in a refixing of the value. This valuation shall, by the statement mentioned in article 1, be notified to the person making the declaration. The period therein mentioned does not, however, apply in this case. Notice of the deposit shall be given by the officials to the person making the declaration."

ARTICLE 7.

The first paragraph of article 10 lapses. The second paragraph of that article shall commence as follows: "The merchandise, if requested, may be given up at once to the person making the declaration, on his depositing security for the amount to the satisfaction of the collector, provided that. "In the last paragraph but one of that article" the word "director" shall read "chairman of the committee;" the word "him" "the inspector or his deputy," while after the word "maintain" the words "unless the committee may have fixed a higher amount, which in that case shall take the place thereof." The last paragraph of that article and that of article 11 shall lapse.

ARTICLE 8.

Article 12 shall read as follows: "As soon as the value has been definitely fixed and the duty in accordance with this law paid, the merchandise in the custody of the collector is at the disposal of the person making the declaration. If the person making the declaration does not claim the merchandise within three months from the date when he is entitled to do so, it is considered as relinquished to the administration on the footing of article 117 of the general law aforesaid."

ARTICLE 9.

Article 13 shall read as follows: "The decision of the inspector or his deputy mentioned in article 2 shall be invoked by depositing an objection in writing at latest on the third working day after that on which the declaration mentioned in article 1 was deposited."

ARTICLE 10.

In the first paragraph of article 14 the words "third paragraph" shall be omitted, and instead of "director" the words "inspector or his deputy" shall be read. In the second paragraph of that article the words "second paragraph" shall be omitted. In the first paragraph of article 15 the word "director" shall read "chairman of the committee," and instead of "him" the words "person making the declaration" shall be inserted.

The last paragraph of that article shall be omitted. In the first paragraph of article 18 the word "director" shall read "director of import dues."

ARTICLE 11.

To articles 19 and 22 the following third paragraph shall be added: "Similar action shall be taken in determining the amount of indemnity in virtue of article 23."

ARTICLE 12.

Article 21 shall read as follows: "The council shall assemble at the place to be appointed by the chairman. The council shall decide in sections of seven members, including the chairman. The chairman shall indicate in every case the six members who are to sit with him, with this understanding, that of those members to arrive at a decision two must belong to those appointed by the State, two to those appointed by one or two arrondissement courts, and the other three to those appointed by one or more chambers of commerce and industry. The chairman may take exception to this rule in case inability to attend of one or more of the indicated members prevent the proceeding with some already convoked meeting. Members of a committee can not be members of the council of appeal."

ARTICLE 13.

Article 23 shall read as follows: "The chairman of the examining committee shall invite in writing the person making the declaration, who appeals, to produce within a fixed period documents which may be advantageous to a just estimate of the value of the merchandise. After the lapse of that period no further written evidence shall be accepted by the committee.

"The chairman of the committee shall set his authentication mark on the papers deposited. In the award they shall be mentioned or the fact stated that the person making the declaration has not deposited any written evidence. If written evidence is presented to the council, which has not passed through the hands of the committee, in that case the council shall take no heed of the same, unless it shall be convinced that the person making the declaration could not possibly have laid those papers in due time before the committee. The examining committee and the council of appeal shall afford the person making the declaration the opportunity of explaining his objections in person or by word of mouth of his representative. The examining committee and the council may consult experts.

"If the value fixed by the committee or the council is not higher or not more than 1 per cent higher than the declared value, the committee or the council may in that case award to the person making the declaration, on his written request, compensation from the State for the delay in the delivery of the merchandise, provided the delay was beyond the control of the person making the declaration. The request shall be made at the office of the collector at whose office the declaration was made, within a period of four weeks from the day on which the award of the committee or the council in regard to the value of the merchandise is made known.

"The compensation shall not exceed 15 per cent of the value of the merchandise delayed. No decision shall be taken on the awarding of compensation until the person making the declaration or his representative and a person appointed by the director of import duties are afforded an opportunity of giving information on the question of what grounds there are for compensation and what should be the amount of it."

ARTICLE 14.

Article 27 shall read as follows: "If the examining committee assign a higher value to the merchandise than the one declared, the person making the declaration shall pay costs to the State, to the amount of the half of the simple duty on the difference between the declared and the increased value, but in any case at least 50 cents. If in case of appeal the council assigns to the merchandise a higher value than the one declared, then the said costs shall amount to the full duty on the difference between the fixed and the declared value, but in any case at least 1 guilder."

ARTICLE 15.

Article 28 shall read as follows: "If the person making the declaration has not paid the dues in accordance with this law within three months after the value has been fixed, it shall be recovered from the security. If no security has been deposited, the merchandise shall be sold by the administrative officials to recover the dues and the net proceeds at the debtor's charge accounted for to the State. If the net proceeds amount to more than the dues, the surplus shall revert to the State, if within a period of two years it is not claimed by the person making the declaration."

ARTICLE 16.

In article 29 the following words shall be omitted: "or the confiscation," and "the third paragraph of." In the second paragraph of article 30 instead of "merchandise for transit," the words "merchandise declared for transit or entrepot;" and for "merchandise for transit with a transit passport" the words "such like merchandise" shall be inserted. In the third paragraph of that article instead of "such a document" the words "transit passport," and for "passport" the words "transit passport" shall be inserted, while at the end shall be added: "The transit transport shall not be accepted without further inspection of the merchandise."

ARTICLE 17.

The supplement to the first paragraph of article 192 of the general law appended to article 29 shall read as follows: "On inspection of merchandise taxed ad valorem and declared for importation, the person making the declaration shall, at the request of the officials, unpack the merchandise and exhibit such as have been declared in a separate declaration apart and distinct from other merchandise. If this is not done, the officials, at the cost and risk of the person making the declaration, may take the necessary steps thereto."

ARTICLE 18.

Article 34 shall be superseded by a new article 34 reading: "In case of a dispute respecting the value of the declared merchandise, any one who, with a view to influencing the decision as to such value, shall purposely produce a false or fraudulent paper, shall be liable to imprisonment for a period not exceeding one year. Actions rendered punishable in virtue of this article shall be regarded as crimes."

ARTICLE 19.

The heading of article 1 shall read: "A. Increase of valuation. Appeal." Above the new article 5 the following heading shall be inserted: "B. Consequences of increase of valuation." In the headings above articles 8, 13, 17, and 27 the letters D, E, F, and G shall, respectively, be superseded by C, D, E, and F.

ARTICLE 20.

The law of the 20th of April, 1895 (Official Gazette, No. 54), as it reads subsequent to revision, in virtue of this law, shall be inserted in the Official Gazette. The revised law shall be quoted under the title of "Valuation law," but with the addition of the year and the number of the Official Gazette in which it is inserted.

FRANCE.

DUTY ON OXIDE OF TIN.

Consul H. S. Van Buren writes that the Nice Chamber of Commerce has asked the Chamber of Deputies of France to raise the duty on oxide of tin to \$5.79 per 220 pounds. As there is but one manufacturer of this article in France, the Chamber of Deputies protests, for the following reasons: First, the proposed duty would result in a monopoly. Second, oxide of tin is used to a large extent in the preparation and manufacture of enameled ware; and as the French concern is in direct

competition with those of Belgium, Switzerland, Spain, and Italy, the fear is expressed that the increased cost of the oxide would result in the substitution of lead, which is recognized as injurious to health.

DUTY ON LITHOGRAPHIC CRAYONS.

Mr. William Korn, a manufacturer of lithographic crayons and ink in New York, calls attention to the fact that lithographic crayons are discriminated against in France by the excessive duty they are now compelled to pay. Mr. Korn says:

For several years the lithographic crayons (which are small cubes of ink in stick form 2 inches by one-fourth inch thick) came under the French duty of 25 francs per 100 kilos, the same rate under which lithographic tusche and rubbing ink, which is in stick form but larger, is now entered. In March, 1903, the French Government demanded that the lithographic crayon must hereafter enter under the heading of "Division of mines for graphite or plumbago crayons No. 301," and pay a duty of 600 francs per 100 kilos instead of the 25 francs as formerly paid, and which should be correct, as the material entering into the composition of the lithographic crayons, being lamp black, beeswax, fat, etc., is almost the same as that composing the tusche and rubbing ink, the real difference being in the mode of manufacture, and there is absolutely no graphite or plumbago in any of my goods. The action of the French Government in this case was arbitrary. My agents in France tried to have the matter adjusted, but without any success, and the lithographic crayon is still paying the exorbitant duty of 600 francs per 100 kilos.

BULGARIA.

THE TREATY NOW IN EFFECT—OPENING FOR AMERICAN EXPORTS.

The new reciprocity agreement with Bulgaria which went into effect on September 30 is expected to lead to a considerable increase in trade with that country. In return for the concessions of article 3 of the Dingley Act Bulgaria gives the United States "most-favored-nation" treatment "both now and hereafter."

The United States will continue to receive under this arrangement whatever concessions Bulgaria may grant to other nations. Bulgaria is under the nominal suzerainty of Turkey, but is practically independent and has the right to conclude commercial arrangements with other countries. Her new tariff went into effect last January, and under it the United Kingdom, Germany, France, Italy, and Serbia already enjoy most-favored-nation treatment. It contains 562 enumerated articles, about one-third of which are in the conventional list. The remainder are subject to higher duty, so that in the majority of the schedules the nations all stand upon an equality of competition.

CYPRUS.

COMMERCIAL FERTILIZERS MADE FREE.

An order in council has been issued by the authorities of the island of Cyprus providing for the free importation of all manure and fertilizers, guano, bone dust, and all chemical manures and preparations to be used as manures.

SPAIN.

COMMERCIAL TREATY WITH SWITZERLAND.

Referring to the commercial agreement between Spain and Switzerland, Minister William M. Collier reports from San Sebastian, as follows:

A *modus vivendi* is established from September 5 to November 20. During this period Swiss imports into Spain are to be dutiable "according to the second tariff, with all the reductions of the existing treaties." The increased tariff rates established by royal order of July 1 and by royal decree of July 29 are abrogated. The new royal order is in all respects like the one putting into effect the American agreement. The royal decree recites that to begin with, on September 5 there will be applied the second tariff, with the rebates stipulated in the existing treaties. The permanent treaty will not be published until presented to the Cortes.

JAPAN.

APPLICATION OF NEW RATES.

The Japanese customs authorities have issued notice that the rates of the present Japanese tariff will be applied to those goods only which have reached the port of importation not later than September 30. Merchandise afloat on October 1 will be subject to the new customs tariff, schedules of which were published in *Daily Consular and Trade Reports* for May 17.

SOUTH AFRICA.

SMALL CATALOGUES FREE OF DUTY.

According to a decision of the customs authorities at Johannesburg, which went into effect July 26, price lists and catalogues sent by mail as printed matter are admitted into Transvaal free of duty, if they weigh less than one-half pound each. Those weighing one-half pound or more are subject to the duty of 4 cents per pound and the clearance fee of 12 cents per parcel. It is understood that this decision has been adopted by the other colonies belonging to the South African Customs Union, states the *Nachrichten für Handel und Industrie*, a German publication.

MADAGASCAR.

IMPORT OF ANIMALS AND CODFISH.

Consul William H. Hunt, of Tamatave, forwards copies of the strict sanitary laws respecting the admission of live animals into Madagascar, and a French ministerial circular in regard to loading certificates of codfish. The consul is informed by the chief of the customs service that there is no special law or decree yet promulgated in that colony governing the admission of food products.

METALS AND MINING.

MANUFACTURES.

CORRUGATED IRON IN AUSTRALIA.

CHIEF ROOFING MATERIAL—HOW BRITISH SECURED TRADE FROM AMERICANS.

From Fremantle, Western Australia, Special Agent Harry R. Burrill sends a report on an important branch of the Australian metal trade, as follows:

Great Britain now controls the enormous corrugated iron market of Western Australia, with the United States second, a curious and disastrous reversal of trade positions from an American view point, since February, 1904. Unless conditions change it will be a difficult, if not a well-nigh hopeless task, for our home manufacturers to recover their supremacy, and the reasons for this unsatisfactory showing are obvious.

When the American product was introduced here two years ago the price was so far below the prevailing English quotation that importers were fairly stampeded, and the control of the trade passed into American hands. It was then the custom of the English houses to charge extra for the long lengths, but the American exporters, besides quoting a lower price for the base, offered to include the 9 and 10 foot lengths at the same figure. This action revolutionized the business, but unfortunately it did not last.

The Lysaght corrugated and plain iron now controls the market, and the change was effected by the employment of sound up-to-date business methods combined with a generous expenditure of capital. While the Lysaght iron is made at Bristol, England, depots have been established at various points in Australia, and large stocks of all sizes are constantly carried. If a buyer now requires a certain quantity, large or small, of a certain size, all that is necessary is to order from Lysaght and it will be shipped at once from the nearest depot. With the American iron, however, an order for nothing less than carload lots of 15 tons each will be considered, and then, too, the time required to ship it out from New York is an added disadvantage.

SHADING PRICES—CORRUGATED IRON EXTENSIVELY USED.

In this state Lysaght carries a full stock of all sizes, and, in addition to this, he sells his "Orb" brand, regarded here as the best corrugated iron manufactured, at approximately the same figure that the importers of the "Apollo" brand from the American mills can quote. Another popular corrugated iron on the market is Lysaght's second grade, called the "Redcliffe," which its manufacturers claim is fully equal in quality to the "Apollo." The manufacturers of the United States have also discontinued their original plan of making no extra charge

for the long lengths, and the result is that the British concern controls the great bulk of the trade. In the opinion of dealers here, in order to regain the business the prices for the American product would have to be considerably below those of Lysaght, for only in that way could it be hoped to offset the tremendous advantage of quick delivery from depots in large or small orders as required.

Some idea of the magnitude of the business done may be formed when it is understood that fully 95 per cent of the roofing in Western Australia is done with galvanized corrugated iron. In addition to this, this material is used for fencing and for the water tanks which are scattered broadcast throughout the state. The market, now large and profitable, is steadily increasing with the development of the country, and for years to come this business promises to be one of the most attractive in point of returns on the money invested in this part of Australia.

As is well known to the trade, the 5, 6, 7, and 8 foot lengths are called the base and, in 1904, the price per ton of American corrugated iron laid down at Fremantle, including cost, insurance, freight, and exchange with a sixty days' sight draft, which carries $2\frac{1}{2}$ per cent exchange, was £14 7s. 6d. At that time there was no extra charge for the long lengths of 9 feet and 10 feet. This year the price for the same goods under the same conditions is £16 9s. for base and an additional charge of 10s. a ton for the 9-foot length and 20s. a ton for the 10-foot length. The plain galvanized sheets cost now, as they did in 1904, 20s. more than the base price of the corrugated iron.

ENGLISH PRICES VARY.

It is impossible to obtain an accurate quotation of the price for which the English product is sold here for the reason that Lysaght, according to the business men of Western Australia, has different prices for different customers. This, of course, creates dissatisfaction, but he is so firmly intrenched on the market that buyers are simply compelled to overlook practices which would be fatal to the successful prosecution of a business enterprise if a wholesome competition could be developed. By careful inquiries it is, however, possible to give the following somewhat interesting figures for the Lysaght products, which are approximately correct, and which indicate the tortuous route which a price travels before it reaches its final destination.

Starting with a cost of £19 5s. for "Orb," 26 gage, the Lysaght mathematician deducts duty, rebate, two discounts, wharfage, and cartage, and figures about as follows: Duty, 15s.; rebate, 6s. 6d.; $2\frac{1}{2}$ per cent cash and $3\frac{1}{2}$ per cent special discount, £1 1s. 9d.; wharfage, 3s. 6d., and cartage, 1s. 6d.; or a total deduction of £2 8s. 3d., making a net price of £16 16s. 9d. This is the price finally quoted, if the market will stand it, while the "Redcliffe" brand is always 10s. less; or, on the foregoing calculation, £16 6s. 9d. as against £16 9s. for the "Apollo."

Beginning at £19 10s. for flat sheets the same same relative reductions are made, and Lysaght's customer in this instance is quoted a price of £17 7s. 6d. for the "Queenshead" brand as against £17 9s. for the "Apollo." These figures, as has been explained, are unreliable because they are subject to such fluctuations as may be necessary to effect a sale, but they will serve to show approximately the difference in the prices of American and English goods.

USE OF FLAT SHEETS—FREIGHT AND TARIFF.

The galvanized flat sheets, or, as they are called in the United States, plain galvanized sheets, are made 72 inches long and 24, 30, and 36 inches wide. The sheets are extensively used in Western Australia for what is known here as hordings or advertising spaces. They are also utilized by tinsmiths for gutterings and down pipes, and may be found on a large majority of the water tanks. The demand is large, steady, and increasing. The American product is highly regarded by the practical men of this State, but the "Queenshead" brand, manufactured by Lysaght, controls the market, for the reasons previously discussed. Tinsmiths unhesitatingly declare, however, that the "Queenshead" is inferior to the "Apollo," of American make, and point out in support of their contention that, in overlapping work, where considerable hammering is required, the galvanizing of the English product will peel off, while the American sheet will remain intact.

The freight charges from the United States to Fremantle are 23s. 6d. a ton and the wharfage on corrugated iron and flat sheets, as on all commodities, is 3s. 6d. a ton. The charges for handling are approximately 1s. 6d. a ton. It is difficult to obtain, either at Fremantle or Perth, an accurate quotation on the freight rates from England to Western Australia, but, as nearly as can be figured out, they are ordinarily slightly in excess of the rate from New York. The customs duty is 15s. per ton on both corrugated and plain sheets, and operate neither in favor of nor against any exporting company.

SUGGESTIONS OFFERED.

The importers of the American product suggest that if the sides of the cases were made of thicker, stronger wood it would be a decided advantage and increase the chances for the arrival of the goods here in an undamaged condition. Dog hooks are used in handling the cases, and frequently, when the wooden sides are of insufficient strength, the great weight of the contents causes them to break and expose the iron. With this exception few complaints are heard regarding the method of packing employed by American shippers. The English have adopted the idea of heavy wooden cases with excellent results, and, in view of the small additional cost, such precautions would certainly prove a paying investment. All corrugated-iron and flat sheets exported to this market are put up in half-ton, felt-lined, close cases, and so far as the lining is concerned the tarred felt used by the American shippers is regarded as superior to that inside the English cases.

As it is only a question of price that prevents the American manufacturers of these products from enjoying their full share of this attractive trade, it would appear to be sound business policy for them to make a special investigation of the conditions through their personal representatives in Western Australia, with a view to placing their goods on the market at figures which could compete successfully with the English prices, even though the margin of profit be somewhat smaller than those to which they might reasonably consider themselves justly entitled. To regain control of the market would require a substantial cut in the prevailing quotations, but, under all the circumstances and in view of the possibilities of the market, would not the experiment be well worth trying?

WIRE COMPETITION.

UNITED STATES LOSING GROUND IN AUSTRALIA TO GERMAN MANUFACTURERS.

Special Agent Harry R. Burrill, in the first of his series of commercial reports on the markets of Australia, covers the situation in regard to wire fencing, of which that country is a great purchaser. Mr. Burrill's letter from Perth reads:

The importation of fencing wire into Western Australia has kept pace with the increase in population and the development of the resources of the State, so that now it has assumed a commanding importance in trade, and competition is keen to supply the market. Up to eighteen months ago the wire used here was largely imported from the United States, but recently German manufacturers have in several instances successfully underbid the lowest American quotation for plain galvanized and black varnished wire, and they now control that market.

The quotations for barbed wire vary but little between the United States and Germany and, because of the excellence of the quality of the American make and the satisfaction it has uniformly given here, it finds a ready sale even though the price may at times be slightly in favor of the German manufacturers.

The commission men and importers of Perth and Fremantle who are handling the American output for this market are at a loss to understand the reason why manufacturers of the United States can not lay down at Fremantle galvanized and black wire at a price that will enable them to compete with German exporters. According to those who are thoroughly in touch with the situation, the marked difference between the American and German quotations for these commodities can not be due to freight rates, for they are now practically the same between New York and Fremantle and Bremen and Fremantle. They declare, further, that they have assurances from American wire men who have investigated the market, not only in the United States but in Germany and England as well, to the effect that neither the German nor the English manufacturer is selling galvanized or black wire at a lower figure than the manufacturer of the United States.

POSSIBLE REBATE SHIPPING ARRANGEMENT.

If this be true, the importers of Western Australia contend that the lower quotations from Germany can only be explained in one of two ways: (1) Either the German Government is assisting the German manufacturer to transport his output from the factory to the seaboard at a rate so low as to enable him to underbid any competitor in foreign fields, or (2) English shippers of American wire receive concessions from the so-called English shipping ring on lines between New York and Fremantle. Whatever may be the cause, it is certain that if the American wire handled here by importers of American commodities and purchased in the United States can not be laid down here at a lower price this market must be abandoned to the German wire exporters.

A comparison of the latest quotations available on American and German plain galvanized wire laid down at Fremantle and including

cost, freight, insurance, and exchange, shows the difficulties under which the importers of the American commodity are now working. For No. 8 gauge plain galvanized wire the American price is £9 12s. a ton, sight draft, and the German figures for the same gauge are £9 6s. 3d., sight draft, a difference of 5s. 6d. in favor of the latter. When it is taken into consideration that in Western Australia the competition is so keen and the margins so close that a shade of 3d. a ton on a bid will invariably secure the contract for this kind of material, it will readily be seen that the American product must be shut out unless radical steps are at once taken to lower the price to the Australian importer. For the No. 10 gauge and the No. 12 gauge an advance of 5s. is now uniformly charged for both American and German wire, although in the past an additional 7s. 6d. was demanded for the No. 10 and No. 12 gauges of German wire.

AMERICANS UNDERBID—WIRE-NETTING POPULARITY.

The American price of £8 4s. per ton, sight draft, for No. 8 gauge black varnished wire is considerably in excess of the German price for the same material, although exact quotations are not at present available. In this wire, as in the plain galvanized wire, the importers of the German article are now invariably underbidding American competitors and driving them from the market.

For barbed wire the American and German prices are practically the same, the quotations at this writing being £11 16s. 6d. for No. 12 gauge, sight draft, and £12 16s. 6d. for No. 14 gauge, sight draft.

Wire netting is used in this State for the purpose of preventing rabbits—the pest of Australia—from devastating the fields, to inclose sheep and hog paddocks, and to protect sheep from the native dogs. It has a tremendous sale, but up to this time the importers of Western Australia have received few, if any, quotations from American manufacturers. Germany and England control this trade, but in view of its constantly growing importance it would seem to be a good business proposition, in the opinion of merchants here, for the wire men of the United States carefully to investigate the requirements of this market with a view to manufacturing an article that can compete successfully with those now in demand.

WIRE-NETTING PRICES—DISCRIMINATION AGAINST AMERICA.

The Western Australian government is now engaged in making special arrangements to assist desirable immigrants to take up homesteads. This policy is aiding materially in settling the vast land areas of this State, and this unquestionably means a constantly increasing demand for wire netting and fencing wire.

The sizes of wire netting for sheep paddocks, used almost exclusively in Western Australia, and imported from Germany, with their prices, laid down at Fremantle, which includes cost, insurance, freight, and exchange, follow:

Width.	Mesh.	Gauge.	Price per mile.
<i>Inches.</i>	<i>Inches.</i>		<i>£. s. d.</i>
30	4	14	17 7 6
36	4	14	21 10 0
30	4	16	11 10 0
36	4	16	14 15 0

The prices for the English wire netting used for the same purpose are practically the same. For rabbit netting the popular size is 42-inch width, 1½-inch mesh, and 17 gauge, and this costs, laid down at Fremantle, c. i. f. and e., about £35 a mile. I inclose for the information of manufacturers a price list of hexagonal galvanized wire netting made in Germany. The price to the trade in Western Australia is 35 per cent off the list quotation, c. i. f. and e. Fremantle. [Quotations of any sizes from this price list will be supplied to manufacturers on their application to the Bureau of Manufactures.]

The Australian government has recently placed a duty of 20 per cent on "Manufactured metal," which is regarded by the importers of Perth and Fremantle as in reality a discrimination against an American woven-wire fence manufacturing company. This company, through its local agents, formerly carried on a lucrative business in this State, but the imposition of this prohibitive duty has almost destroyed it. Because of the superiority of the material, however, it is still on the market. This duty means an additional cost of practically £4 a mile, and, according to the business men here, is levied in the interests of a Victoria, Australia, wire-netting manufacturing company.

COST OF TRANSPORTATION AND EXCHANGE.

The freight rates on wire netting from Germany to Fremantle by mail steamer are 22s. 6d. a ton and by cargo boat 18s. 9d. a ton. The rates on wire netting and fencing wire from England to Fremantle via Singapore have been approximately 32s. 6d., but there have recently been evidences of a disposition on the part of the English carriers to lower rates to Fremantle. The wharfage on wire netting, fencing wire, and in fact all commodities amounts to 3s. 6d. a ton and the handling charges are about 1s. 6d. a ton.

The latest quotation on freight rates between New York and Fremantle for plain wire is 22s. 6d. a ton, and for barbed wire 23s. 9d. a ton. As against these rates the North German Lloyd Steamship Company now quotes between Bremen and Fremantle via Suez 21s. a ton for wire. One and one-half shillings on a ton freight is a serious handicap in a market where buying is so close and competition so keen, and the remedy which suggests itself to the business men of Western Australia who are handling American goods is lower rates.

Notwithstanding the fact that the government of Western Australia has erected approximately 1,000 miles of rabbit netting, the demand, both from government and private sources, remains steady, and its continuance is apparently assured. It is undeniably a field well worth cultivating, and one in which the American manufacturer should be an important, if not the controlling, factor.

In quoting prices for wire reference is made to sight drafts, and these must always be taken into consideration when Australian business is discussed. On a sight draft 1½ per cent exchange is charged. On a sixty-day draft 2½ per cent exchange is charged, and 3½ per cent exchange is charged on a ninety-day draft. The purchase of goods by the importers of this State is practically a cash transaction on all occasions, except where special arrangements have been made between American or European houses and their personal representatives here. For this reason exchange is an important item and must not be overlooked when giving quotations on commodities.

EVEN CHANCE IN TARIFF RATES.

Western Australia discriminates neither in favor of nor against any nation in the matter of tariff. There are no preferential rates here, and consequently the customs duties do not operate against any particular country. The duty on barbed wire is set down at 10 per cent ad valorem, but, under the system in vogue, which adds 10 per cent to the value for duty and 10 per cent on that amount, the rate of duty is really about 11 per cent. Both galvanized and black wire are admitted free. Wire netting is also admitted free, but there is now a movement on foot to place a duty on it for the purpose of protecting Australian manufacturers. The market for barbed wire has so expanded as to offer special inducements to the business men of the Commonwealth to enter the field, and efforts are also being made to insure them against foreign competition.

PACKING AND SHIPPING.

Wire exported from the United States to Western Australia has, as a rule, been properly packed, although in a few shipments which have been brought to my attention, not a little carelessness was shown. The necessity for exercising the utmost care in packing, not only wire but all other commodities destined for this port, can not be too strongly emphasized and any deviation from this rule will generally result in the arrival of cargo in a damaged and unsalable condition.

Complaints are also made that the American wire exporters will not ship to suit the convenience of their customers. Vexatious delays occasionally occur on orders required for immediate delivery and several consignments of fencing wire, billed to Fremantle, have been transshipped at Bremen. This method of shipping is especially annoying to the importers of this State and should always be avoided if possible. It is suggested that if the New York exporter finds that he is unable to make an immediate direct shipment he cable his representative here before arranging for a transshipment on the Continent to ascertain what his wishes are. The chances are that the Australian importer will prefer to wait for his goods rather than to intrust them to unnecessary handling. They declare that cargoes are always damaged more or less when transshipped and they greatly prefer direct shipment.

A careful investigation of the wire market here can lead to but one conclusion, and that is if the American manufacturer desires to remain a factor of any importance in the field and wishes to participate in the trade expansion of the future, he must lay down his goods at Fremantle at a price that will enable him to compete with his wide-awake German competitors. They are out for the business and they are getting it.

INDIA'S PURCHASES.

VAST TRADE IN IMPORTATIONS AND CAPABLE OF GREAT EXPANSION.

A detailed analysis of India's purchases in metal and machinery for the year 1905-6 is given by the Government's Trade Journal.

From the following statistics it will appear that the imports of hardware and cutlery have declined by about 4.5 per cent, while the implement and sewing-machine purchases considerably increased:

	1903-4.	1904-5.	1905-6.
Cutlery.....	\$418,475	\$498,450	\$468,325
Agricultural implements.....	236,060	261,825	276,250
Other implements and tools.....	372,245	377,675	441,160
Enameled ironware.....	604,400	385,625	441,126
Sewing machines.....	336,125	335,515	362,010
Unspecified hardware.....	5,782,021	5,890,300	5,583,500
Total.....	7,749,316	7,699,290	7,572,321

Of the total the United Kingdom increased its percentage to 68.8, Germany increasing in proportion, Belgium and Austria showing a decline. In enameled ware Austria was formerly supreme, but in 1905-6 her share receded from 62 to 40 per cent, while Germany's advanced from 31 to 54 per cent. Germany likewise increased her hardware and cutlery sales from 18.6 to 19.4 per cent of the total. The following gives the total values of the imports of iron and steel for the last five years:

	Iron.	Steel.	Total.
1901-2.....	\$9,677,500	\$6,535,525	\$16,213,025
1902-3.....	10,101,622	6,853,425	16,955,047
1903-4.....	11,269,275	8,736,730	20,006,005
1904-5.....	12,617,015	7,801,110	20,418,125
1905-6.....	11,369,550	10,781,805	22,151,355

There was a contraction in the receipts from the United Kingdom which supplied only 53.9 per cent of the total quantity and 61.5 per cent of the total value, as against 60.5 per cent and 67.6 per cent in 1904-5, the loss being in iron productions, while the British sales in steel alone increased. Germany and Belgium, however, registered an advance in both departments.

The continuous growth in the importation of machinery is stated to be one of the most healthy features of Indian trade, and has been remarkable in the year 1905-6. The totals of the various classes of machinery imported into all India were as follows:

Steam engines and parts.....	\$3,427,300
Textile.....	8,210,640
Electrical.....	768,650
Mining.....	197,000
Other descriptions.....	3,795,310
Total.....	16,398,900

IRON, STEEL, AND COAL.

INCREASING IRON AND STEEL PRODUCTION IN WALES.

Consul D. W. Williams makes a report from Cardiff on the activity in Wales in the production of iron and steel. He writes:

There were 483,031 tons of pig iron produced in Wales and Monmouthshire during the first six months in 1906, an increase of 4,220 tons over the output for the corresponding period in 1905. The pro-

duction by classification was 39,504 tons of forge and foundry, 398,881 tons of hematite, and 44,646 tons of basic. The output of pig iron in Great Britain during the same period showed a much larger proportion of increase, for the total output was 4,905,424 tons, an increase of 283,824 tons compared with the first half of 1905. It appears that 157,760 tons of British pig iron were exported to the United States during the eight months ending August 31, and that 4,038 tons of American iron were imported during the same period. The British pig-iron industry is largely dependent upon foreign countries for its supply of iron ore, the imports for the first eight months of 1906 exceeding 5,000,000 tons, of which Spain furnished by far the larger per cent.

There were 436,877 tons of open-hearth steel ingots produced in Wales and Monmouthshire during the first six months in 1906, an increase of 15,160 tons, as compared with a like period in 1905. Of the output of 333,291 tons were acid and 103,586 were basic. Wales retained its rank as the third producing district in Great Britain, where the total output during the same period was 2,196,853 tons, an increase of 216,758 tons over the first half of 1905, with 375 furnaces in operation. Wales produced only 58,666 tons of plates and angles, 35,658 tons of blooms, and 8,819 tons of steel rails, but it ranked first in the production of bars, including tin-plate bars, for its output was 355,834 tons of the total of 493,981 tons produced in Great Britain.

MINERS GRANTED ANOTHER INCREASE.

Under the agreement between Welsh masters and miners an appeal for a change of wage rate may be made each quarter. The miners asked for an increase of $3\frac{1}{2}$ per cent from June 1, and the conciliation board granted $2\frac{1}{2}$ per cent. The miners asked for a second increase, from September 1, 1906, and the independent chairman granted this demand, which was for 5 per cent, basing his decision on the improvement in prices and the improvement in prospect. With the repeal of the export tax of 1 shilling a ton in October the miners will undoubtedly ask for another increase for December.

These concessions on the part of the masters indicate that there is a marked improvement in the Welsh coal trade since 1905, when the wages were reduced to a minimum. The improvement is due both to a greater demand abroad as well as to better prices. The increase of coal exports from the Bristol Channel ports during August, as compared with August, 1905, was 204,016 tons, of which Cardiff furnished 147,776 tons. A large per cent of the latter tonnage went to South American ports, Buenos Aires and Montevideo taking 8,368 tons and 22,117 tons, respectively. The Welsh ports are sending increased quantities of patent fuel to Mexico as compared with the figures of 1905, and this product seems to be displacing American coal and coke in that country.

The best Cardiff coal is now quoted at \$3.71 a ton and the best patent fuel at \$3.95 a ton. If the prices continue to improve, a limit will soon be reached that will enable American coal to compete successfully with the Welsh product in all American ports, and possibly in the Mediterranean.

LEAD AND COAL ADVANCING.

BRITISH MARKETS KEENLY INTERESTED IN THE COMMODITIES.

Consul H. W. Metcalf quotes from Newcastle papers on the coal and lead markets in England as follows:

Because of the forthcoming repeal of the coal tax coal dealers are quoting higher prices for new business, and it appears that they will get them. The shipowners, too, who have always held that they suffered from the tax, are anticipating proportionately higher coal freights after November 1, and the foreign buyer, not to be outdone, is now maneuvering to defer current shipments until after the tax is removed, so as to secure his share. There are thus a number of claimants for the 1 shilling a ton impost of which the coal export trade is to be relieved, and it is impossible that they can all be satisfied. The miners can not fairly claim an advance in wages until higher prices actually secured entitle them to it, and if such higher prices are secured the advance in wages will come from the sliding scale.

Manufactured leads have reached a price which has not been touched since the Franco-German war. Red lead now stands at \$101 a ton, though white lead is not quite so high in proportion. Sheets are \$99.78 a ton, and pigs are quite scarce at \$92.46. These are high prices, and they seem to be justified by the prevailing scarcity of raw lead. The imports into London for September have been only a fifth of the normal average, while statistics for August show a marked shortage in supplies. It is hardly probable that this state of things can speedily change, and so manufacturers look for a continuance of high prices. In these circumstances lead producers, both at home and abroad, promise to have everything in their favor for some time to come, and as a result the English lead-mining industry is expected to take a new lease of life.

BRITISH COAL TRADE.

EFFECT OF THE COAL DUTY ON EXPORTS.

The following statement has been compiled from a printed return to an order of the House of Commons, giving the quantities of coal exported from the United Kingdom since the imposition of the coal duty in 1901:

Price per ton.	Exports in—				
	1901 (9 months).	1902.	1903.	1904.	1905.
	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>
Not exceeding \$1.20	181,821	785,869	554,536	1,731,347	1,704,498
Exceeding \$1.20 to not exceeding \$1.45...	709,062	2,491,064	3,995,796	4,118,365	4,200,491
Exceeding \$1.45 to not exceeding \$1.70...	389,743	815,329	833,867	493,860	734,539
Exceeding \$1.70 to not exceeding \$1.95...	672,247	2,304,730	2,137,294	5,025,333	8,132,062
Exceeding \$1.95	28,269,681	36,762,554	37,428,564	34,886,642	32,705,102
Total exports.....	30,222,554	43,159,046	44,960,057	46,255,547	47,476,707

The foregoing are the prices derived from the values declared by the exporters at the time of shipments and are exclusive of duty.

A footnote in the official publication covering the trade of the United Kingdom for 1905 gives the following information relative to this coal duty:

On April 19, 1901, coal, coke, and manufactured fuel exported became subject to a customs duty of 1 shilling (24 cents) per ton. Under the provisions of the "finance act, 1901," the duty on manufactured fuel was fixed at 90 per cent of the export duty on coal, and the rebate of the duty allowed on coal exported not exceeding 6 shillings (\$1.45) per ton in value f. o. b. The net amount of the duty paid from that date to December 31, 1901, was £977,256 (\$4,756,000); from January 1 to December 31, 1902, £1,855,580 (\$9,030,100); from January 1 to December 31, 1903, £2,054,538 (\$9,999,800); from January 1 to December 31, 1904, £2,042,932 (\$9,942,300); from January 1 to December 31, 1905, £2,103,655 (\$10,237,900).

To complete the subject, the following statement, prepared from official returns, showing the value of the coal, coke, and patent fuel exported from the United Kingdom, has been prepared. As the different sorts of coal were not separately recorded prior to 1903, the statement covers only three years—1903, 1904, and 1905.

Value of coal, coke, and patent fuel exported from the United Kingdom, 1903-1905.

Description.	1903.	1904.	1905.
Coal:			
Small—			
Anthracite	\$1,469,300	\$1,516,500	\$1,688,500
Steam	12,402,000	11,697,800	12,539,700
Gas	450,600	525,700	590,800
Household	890,100	1,112,500	945,700
Other sorts	2,358,900	2,163,700	2,470,300
Through and through, unscreened—			
Steam	3,154,600	2,109,700	2,074,100
Gas	13,099,700	12,511,400	13,212,100
Household	30,200	16,600	24,800
Other sorts	1,506,400	1,400,100	1,510,700
Large—			
Anthracite	3,116,100	2,660,800	2,956,000
Steam	82,031,100	82,986,000	77,761,100
Gas	2,947,200	2,662,600	2,647,500
Household	3,149,700	2,636,300	2,460,100
Other sorts	99,300	103,200	95,400
Total coal	126,708,200	124,102,900	120,976,800
Coke	2,828,000	2,795,000	2,701,900
Fuel, manufactured	3,140,900	3,877,200	3,147,700
Grand total exports	132,677,100	130,775,100	126,826,400

WORLD'S COAL OUTPUT.

UNITED STATES LEADS IN PRODUCTION—BRITAIN IN EXPORTS.

The latest statistics available of the coal production of the world in 1905 put the total at 929,623,000 tons, as compared with 867,021,000 tons in 1904, or an increase of 7½ per cent.

Most of the producing countries share in the advance, the notable exceptions being Belgium and Russia. The greatest gain is exhibited by the United States, whose output has jumped from 318,276,000 to 352,694,000 tons, or a rise of 6½ per cent. America is now by far the largest producer, though the United Kingdom is no mean second and still remains the biggest exporter. The production of the United

Kingdom, according to British official figures, was 239,889,000, as against 236,147,000 tons, or an advance of $1\frac{1}{2}$ per cent. Germany, the third largest producer, mined 173,664,000 tons, as against 169,448,000 tons, or a gain of $2\frac{1}{2}$ per cent. The output of India increased from 7,682,000 to 7,921,000 tons and of Japan from 11,600,000 to 11,895,000 tons. Austria-Hungary's total is 40,725,000, as compared with 40,335,000 tons; and France's contribution is 36,048,000, as against 34,502,000 tons. The yield of Canada has grown from 6,814,000 to 7,959,000 tons, and of South Africa from 3,015,000 to 3,219,000 tons. Spain's output remains at about 3,200,000 tons. A decline is shown in the chief producing States of Australasia, New South Wales, and New Zealand. The production of Belgium has dropped from 23,380,000 to 21,844,000 tons and of Russia from 19,318,000 to 17,120,000 tons, but the exceptional factors that must be taken into account in the latter case are of course obvious.

COAL MINING IN INDIA.

IT HAS FUEL RESOURCES TO SUPPLY THE EASTERN WORLD.

Recently the owner and operator of coal mines in Bengal was in the office of Consul-General William H. Michael, at Calcutta, and stated that he pays his coolie labor 11 annas or 22 cents per ton for mining coal, and that it costs him about 55 cents a ton to mine, screen, and load on the cars. Mr. Michael writes further:

All of the coal of India is bituminous. Some of it is hard and glossy and is much like Rock Springs, Wyo., coal. Such coal retails in Calcutta at 8 annas or 16 cents per maund (82 pounds). There are 27 maunds per ton, which would make a ton cost \$4.41. By purchasing a ton or more at one time the rate is from \$2.08 to \$2.24 per ton.

The coal fields now operated are located in Bengal, the native States of Central India, and Hyderabad. A comparison of the figures officially given out will show that India is first among the coal-producing dependencies of Great Britain. In answer to my question as to whether there were other coal deposits not yet opened, I was assured that the coal fields of India had scarcely been touched; that India's coal field is estimated to cover 35,000 square miles. The total output during 1905 was 7,762,779 tons. Bengal, in which Calcutta is situated, supplied 93 per cent of this amount.

JAPAN IS EXHAUSTING HER COAL.

Japan is at present India's only real competitor in the Orient; but, considering the difference in the extent of the coal fields of India and those of Japan, it is reasonable to conclude that the day is not far off when India will control the Far Eastern coal market. The conclusion is based on the fact that Japan has but 6,000 square miles of coal field. Her present annual output is 10,000,000 tons, which is in excess of the Indian mines, but this is a small tonnage compared with what India is capable of producing. The latter has the coal, abundant cheap labor, and the capital; also convenient water transportation to the sea. The hauls by rail are short and comparatively inexpensive.

This service is being supplied as rapidly as possible to meet the demands of the inland trade.

In referring to the coal future, the chief inspector of mines for India observes that the chief need for a sound development of the Indian coal fields is improvement in superintendence and working capacity of the miner. The methods of working the mines are crude and unscientific, and this results in not only a smaller output than should be expected but also in great waste. To overcome this condition the government of India has established a college, which has a large attendance, at Sibpore, for the scientific training of native engineers with special reference to coal mining. It is believed that the classes at this institution will furnish the needed skilled assistants to European superintendents.

The Indian miner performs work underground much as the Indian laborer does on top of the ground. Whatever kind of labor he undertakes he brings to it an easy-going manner and bone and muscle that are far inferior to that of the English miner or the miners in America. In fact, he accomplishes less than half the results of the Western miner. He has not the physique, having inherited small bones, light muscles, and an "easy way" from his ancestors. It is believed, however, that he is growing stronger and becoming more capable, and that in time the coal miners of India will by heredity become almost equal to coal miners anywhere.

TOILING WOMEN LABORERS.

One thing is to be deplored, and that is the employment of women in and about the mines as laborers. Some of these cooly women are said to walk 5 miles in a day in the performance of their work, and carry on their heads loads of 80 pounds half that distance. There is a strong sentiment growing against this sort of drudgery for women, but I fancy it will be a long time before the women of India will be delivered from such toil. It has not been so many years since women and children were rescued from such drudgery in other and more enlightened countries.

Here, in the capital of India, the cooly women carry bricks and mortar on their heads and climb bamboo ladders to the third and fourth stories of buildings as helpers to cooly masons. These women sweep the streets and do all sorts of menial labor. They carry on their heads burdens seemingly large enough to bend the backs of bullocks and donkeys. Even girls of 8 and 10 years of age carry loads on their heads weighing 50 and more pounds and trudge along under the sun's intense rays with the mercury rising to 100° in the shade.

KRUPP WORKS.

GREAT PROGRESS OF GUN MAKING.

According to Consul-General Guenther the celebrated works of Krupp at Essen, Magdeburg, Kiel, Annen, and at their ore and coal mines had, on April 1, 1906, in their employ 62,553 persons, of whom 5,065 were officials and clerks, against a total of 55,816 employees in the year before. The company's principal plant and accessories at Essen consumed as much water in said year as did the entire city of Dresden, which latter has a population of over 400,000 inhabitants.

The gas made and consumed by the single cast-steel plant at Essen exceeds the gas consumption of the city of Elberfeld. Besides this, the electric plant of said cast-steel works supplies 1,651 arc lamps, 15,304 incandescent lamps, and 763 electric motors. The average daily wage paid in 1905 to the workers in the cast-steel plant was \$1.22 per person, which is about 5½ cents more than was paid in the preceding year.

BELGIUM'S INDUSTRIES.

PRODUCTION OF LIEGE DISTRICT.

Consul J. C. McNally reports on the conditions of the metal industries of his district, which includes the country in and around Liege, Belgium. He says that all branches of industry in Liege are in a fairly satisfactory condition. While in some instances last year production fell below that of the previous year the net value of what was produced was in excess. The coal and coke production varied little. The briquette industry continues to increase and the production last year was 258,410 tons, against 224,730 tons in 1904. The blast furnaces produced 626,650 tons of cast steel, against 623,137 tons in the previous year.

Including the production of the other provinces the total of raw zinc in Belgium was 142,555 tons, or nearly 30 per cent of the total production of all Europe. In 1905 the rolling mills produced 44,050 tons of rolled zinc, valued at \$5,689,466.

The lead production was 17,405 tons, valued at \$1,157,826. The silver obtained from the lead ore in smelting was 97,636 pounds, valued at \$867,477.

CALCIUM AND STEEL IN FRANCE.

COMBINATION MOST USEFUL IN PURIFYING METALS.

It has been stated in previous reports from Consul-General Frank H. Mason, of Paris, that the hope for availability of calcium metal to impart new and valuable qualities to steel by admixture in a molten state—as is done with nickel and chrome metal for the manufacture of nickel and chrome steel—has not been realized. Mr. Mason now makes the following additional statement:

Elaborate experiments which have been made in Germany appear to have demonstrated conclusively that calcium metal does not combine with molten iron under conditions which are practicable in industrial metallurgy. But it has been incidentally discovered during these experiments that calcium metal is an exceedingly efficient agent for freeing steel from the last traces of certain impurities—gas, carbonic oxide, etc.—which are difficult to eliminate by ordinary means. This purification is highly important in the manufacture of steel for certain electrical purposes, and the method in which calcium is used for this purpose is ingenious and interesting.

Calcium metal smelts and is expelled so rapidly when thrown into molten steel or iron that its purifying effect is mainly lost unless special means are employed to distribute it through the molten mass. This has been successfully done in Germany by mixing together filings or shavings of calcium, aluminium, and iron in a plastic composition

that is molded into a form that is called technically a "briquette" or "cartridge." This cartridge is inserted in a clamp or holder at the end of a long iron rod, and with this as a handle the "briquette" is plunged to the bottom of the molten metal in a furnace. The iron in the briquette retards its smelting and the aluminium aids to disseminate the calcium throughout the molten mass, with the result that the final impurities, which are ordinarily left to concentrate at the middle of steel billets are gathered, fixed, carried into the slag, and eliminated.

MALAY STATES TIN.

A RECENT REPORT RECORDS A DECREASE IN OUTPUT.

Consul-General D. A. Wilber, of Singapore, reports on the tin production of the Malay States for the first six months of 1906, calling attention to the decrease of 955 tons in the amount mined. He writes:

The output of all the tin-bearing States of the Malay Peninsula for the first six months of 1905 and 1906, expressed in tons of 2,240 pounds, was 24,940 and 23,985, respectively.

The amount of export duty, in United States currency, collected on the product based upon the price, which was higher this year than last, shows considerable increase this year over last year, although the output shows a decrease. It was \$2,642,333 in 1906 and \$2,448,990 in 1905.

The amount of tin exported from the Straits Settlements to the United States in the first seven months of 1903 was 13,671 tons of 2,240 pounds each. During that period England took 13,644 tons; Continental Europe, 4,061 tons; total, 31,376. In 1906 the amounts for a like period were: To the United States, 8,115 tons; England, 20,540 tons; Continental Europe, 4,492 tons; total, 33,147 tons, a total increase of 747 tons in 1906 over 1905, and 1,771 more than for a like period in 1903. The consul writes:

The report of the commissioner of mines for the first four months of the year shows a decreased output from the native States of Perak, Selangor, and Negri Sembilan of 442 tons. Report from the State of Pahang not yet received. The exports of tin from the colony show an increase for the first seven months of the present year over the same period in 1905 of 747 long tons, proving conclusively, with a decreased output, that considerable stock was carried over the new year. Conditions here at no time warranted either the extraordinary advance or decline in price last spring, which from this end looked extremely speculative.

DIRECT SHIPMENTS TO THE UNITED STATES DECLINE.

Shipments of tin direct to the United States have fallen off greatly the past three years. For the first seven months of this year they were 40 per cent less than during the same period in 1903, while the shipments to England increased 33½ per cent. This shows a growing tendency on the part of American buyers to purchase what is known here as London optional shipments—that is, tin shipped to London, optional rate, by payment of one shilling per ton in addition to the English or Continental rate of 27s. 6d. per ton. Goods shipped

by this optional rate can be unloaded in England, put in store, held, and shipped to America without extra cost when it suits the sellers' convenience.

The rate of freight on tin to New York, via Suez Canal direct, is 20s. or 8s. 6d. less than optional rate per ton.

London, it is said, controls the tin market, and America consumes 40 per cent of the world's output. As long as the bulk of American purchases are made through or in London the situation will probably remain the same. It would seem advisable for American buyers of tin to break away from London influence and control by purchasing here and shipping direct to the United States, thereby saving 8s. 6d. per ton on freight, plus the middleman's profit, at the same time eliminating from the London market the influence of heavy American orders. All orders from London or elsewhere are filled by agents here, who buy from the Straits Trading Company, the agent who can pay the highest price securing the product on an open market.

The Straits Trading Company, the only smelters here, have a monopoly of that branch of the business. There are no laws to prevent a foreign corporation or individuals from acquiring property and erecting a smelting plant. Such an enterprise would be hailed with delight, no doubt, by a large number of miners who are completely under the control of the Straits Trading Company. Had the International Tin Company, when they started operations here about two years ago, erected a smelting plant instead of attempting to export the ore to the United States they would have profited better and would not have been forced to abandon their project. As soon as they began to ship ore the Straits Trading Company brought all their influence to bear upon the Government, claiming the shipment of ore was taking labor away from the Colony. The Federated Malay States stepped in and imposed a heavy export duty on all tin ore shipped to countries outside of England and the Straits Settlements, driving the International Tin Company from the field.

PORTUGUESE MINING.

POSSIBLE SOURCE OF EXTENSIVE IRON AND COPPER SUPPLIES.

Chargé d'Affaires H. P. Fletcher, of Lisbon, transmits a report on the different kinds of minerals in Portugal, from which an abstract is taken. He writes:

The whole of Portugal is susceptible of enormous mineral development, though at present the difficulties of transportation and the high tariff of \$5.50 a ton on all mining implements render extensive mining operations almost prohibitive. Concessions are not difficult to secure, and are continually being received, chiefly, however, for lead and manganese mines. The best known copper mines are located at San Domingos, the ore of which is shipped to England. The iron pyrites and copper mines at Aljustrel belong to a Belgian company, and have been worked for four hundred years. Iron is found throughout Portugal, but the lack of nearby coal has prevented any ironworks growing up. Manganese, wolfram, lead, and silver are found in many districts. Considerable quantities of galena were formerly exported from the mines at Terramonte, and there also are galena mines at Bracal, the ore containing 80 grains of silver to the metric ton. Gold

is found in auriferous quartz in several localities. Gold washing is carried on principally on the rivers in the interior, the yield from which is from \$1 to \$2 a day. The antimony mines in the district of Oporto also contain gold.

ASPHALT IN ALSACE.

GERMAN INDUSTRY SEVENTY-FIVE YEARS OLD.

Consul J. J. Brittain reports from Kehl on the asphalt mines at Lob-sann, Alsace, Germany, which he recently visited.

These mines have been in operation for the past seventy-five years, but until eleven years ago were operated in a primitive manner, with but little machinery. Ten years ago a German-English company bought the mines and leased very extensive tracts of land in the Vogesen Mountains, near the town of Sulz u. Wald. This new company has installed modern machinery and an electric plant.

The asphalt is found in great quantities under the mountains, the veins varying from 3 to 30 feet thick, frequently dipping to an angle of 20 to 30 degrees in the mine. In some places one is obliged, in following the veins, to descend by ladders into the rich basins of asphalt. The asphalt is very rich in quality and dark brown in color, but when exposed to the air becomes light gray. It is shipped in three conditions. The powder is used in compressed work, and in pure dry condition is placed on the street over a concrete bed and subjected to heavy pressure. This covering of asphalt is usually from 2½ to 3 inches in thickness. It is also made into compressed blocks, which are very durable and are used in paving sidewalks, and for lawn-tennis courts, cellar floors, etc. It is also sold in large blocks, to be afterwards mixed for paving purposes. About 100 men are employed, and the average wages paid the miners is about 71 cents per day. Some men have been working in the mine for fifty years at the same jobs.

GOLD IN INDIA.

GOOD SHOWING OF MINES AND EXCELLENT PROSPECTS.

In a report from Calcutta Consul-General William H. Michael says that it is not generally understood that India is a gold-producing country, yet good judges of the gold resources of India are of the opinion that the time will come when that country will rank high as a producer of the yellow metal.

A practical gold miner, who also enjoys the reputation of being a geologist, said recently that India had "hardly been scratched for gold or any other mineral deposit." The official report on the output of gold in India during the month of July last shows the following:

Balaghat.—Four thousand five hundred and fifty tons of quartz crushed yielded 3,540 ounces, and 4,004 tons of tailings cyanided yielded 403 ounces, making a total of 3,943 ounces of gold.

Coromandel.—Eight hundred and fifty tons of quartz crushed yielded 325 ounces of gold.

Mysore.—Sixteen thousand one hundred tons of quartz crushed produced 15,401 ounces, and 13,000 tons of tailings cyanided yielded 1,864 ounces, making a total production of 17,265 ounces of gold.

Mysore West.—Mill ran 672 hours, crushed 1,870 tons, and yielded 402 ounces bar gold, and 2,496 tons of tailings treated by the cyanide process yielded 139 ounces standard gold.

Nundydroog.—Six thousand nine hundred tons of quartz crushed yielded 5,352 ounces, and 7,020 tons of tailings cyanided yielded 689 ounces, making a total yield of 6,041 ounces of gold.

Ooregum.—Stuff crushed, 10,150 tons; gold produced, 4,614 ounces; gold and slimes and tailings cyanided, 9,089 tons, produced 1,010 ounces gold, making a total yield of 5,624 ounces of gold.

Champion Reef.—Milled 10,404 tons, which produced 10,283 ounces of gold, and 18,628 tons of tailings treated by the cyanide process produced 2,071 ounces of gold, making a total production of 12,354 ounces.

This is not a bad showing for India as a gold producer.

FORMOSA MINES.

MINERAL PRODUCTION AND NEW GOVERNMENT REGULATIONS.

Consul Fred D. Fisher supplies from Tamsui a translation of the Formosan mining regulations which were put into force on August 1. These are on file for inspection at the Bureau of Manufactures. Mr. Fisher writes:

Under this law corporations composed of foreign stockholders, incorporated under the laws of Japan, may hold mining property in Formosa. The production of minerals in Formosa, with the exception of petroleum, which is insignificant, during 1905 was 47,341 ounces of quartz gold, 3,050 ounces of placer gold, 94,216 tons of coal, and 1,121 tons of sulphur. These minerals are produced in the mountainous regions of the northern and northeastern parts of the island. The sulphur is found to the north of Taihoku; the coal district lies to the east of the sulphur district, and the gold quartz and placer districts lie to the east of the coal district, to the southeast of Kilung. Coal has also been found to the south of Taihoku, near the village of Sintiam, and gold is known to exist in the northern parts and along the east coast of the savage districts of the north.

The production of gold from quartz has nearly doubled since 1902, while the production from placer diggings has nearly ceased. The quartz production is from the mines of the three Japanese companies, who reduce the ore by Blake crushers and Huntington rolls, and the separation is by the cyanide and quicksilver processes. The ore is of a siliceous nature, and contains a small percentage of antimony; its average value is from \$8 to \$10 per ton.

The quality of Formosa coal compares favorably with the softer Japanese coals. The seams are narrow and highly faulted, and the strata in the region in which coal is found is badly broken by upheavals. It is not probable that extensive undertakings in coal mining in Formosa would be profitable. Coal is obtained chiefly from hand diggings near the surface by natives.

MISCELLANEOUS.

HOP CROP OF THE WORLD.

PRODUCTION MUCH LOWER THAN AVERAGE.

SHORTAGE IN EUROPE PROVIDES FOR AMERICAN EXPORTS.

Consul William Bardel, writing from Bamberg, says that after a careful study of reports in trade papers and inquiries among a number of prominent Bavarian hop growers and hop merchants, it is safe to state at this moment that the world's hop crop for 1906 will fall considerably behind that of last year.

Hop growers in Germany during this season experienced many difficulties. The plants survived the very long but rather mild winter remarkably well, and the fresh growth up to the middle of the month of May looked strong and healthy, but after that time continuous rains favored the accumulation of insects and sicknesses of all kinds and retarded the development of the plants to a dangerous degree. Toward the end of June the weather became more favorable, but its beneficial influence was not an universal one, since only in better situated and extremely well-kept gardens a decided improvement became visible.

WHAT SAVED THE CROPS.

It is only during August that a change for the better is reported from nearly all the hop-growing sections in Germany. Warm, sunny weather, interrupted by plentiful showers, has reduced some of the damaging elements, and has contributed much toward the formation and improvement of the plants and fruits. Even some of the less favored gardens show fresh life, and with a continuation of the present favorable weather may still recover enough to produce a fair amount of crop. Altogether, this year's harvest will commence at least two weeks behind the usual time. In some of the important points of Bavaria the hop crop will be almost as fine and as large as last year, while in others it is hoped that the present weather will improve the prospects, which at a time were very poor; but all told, the Bavarian crops are calculated to fall about two-fifths short of last year.

REPORTS FROM WORLD'S HOP FIELDS.

In Wurttemberg the condition of the plants is reported to be satisfactory. Baden reports to have grown well developed, sound plants. Alsace reports improvement within the last few weeks. Posen and the other North German hop-growing States report prospects for medium crop.

While the hop crop in Germany will fall considerably behind last years' harvest, Bohemia is reported to show still more unfavorable

figures as compared with last year. Bad weather and insects have hurt the Bohemian plants so much that the situation there is reported to be quite critical. Steienmark and the other Austrian hop-growing provinces, however, will probably do as well as last year.

In Belgium the plants are in poor condition. The same is reported about the hops in Russia, where probably not half a crop will be raised this year.

Also in Great Britain the hop plants have suffered much through insects, and the crop there will barely reach one-half of last year.

Although the figures quoted below are only guesswork, and changes one way or another may still occur within the next few weeks, it is quite safe to say that this year's hop crop of Europe will fall considerably behind that of last year.

With the very favorable crop reported from the United States, American hop growers this season ought to be able to export their product to Europe, particularly to England.

ESTIMATE OF PRODUCTION.

Some of the most important hop merchants here state that while the world's hop crop of 1906 will be small in comparison to last year's, prices are not likely to rule high, since brewers in Germany, as well as in Great Britain, carry over stock from last year into the new season, to last from eight to ten months. Following is a comparison of the two years:

[In American hundredweight.]

Country.	Crop of 1905.	Estimated crop for 1906.	Country.	Crop of 1905.	Estimated crop for 1906.
Bavaria	340,000	190,000	Belgium	110,000	33,000
Alsace	115,000	75,000	Russia	90,000	70,000
Wurtemberg	90,000	55,000	France.....	75,000	45,000
Remainder of Germany ..	85,000	55,000	England	695,000	320,000
Total of Germany ..	630,000	375,000	United States	500,000	550,000
Bohemia, Saaz.....	210,000	85,000	Total world's crops.	2,530,000	1,681,000
Auscha	85,000	38,000			
Remaining Austrian prov- inces	135,000	70,000			
Total of Austria	430,000	188,000			

HIGHER ESTIMATE.

YIELD IN EUROPE NOW FIGURED CONSIDERABLY MORE.

A report from Consul George E. Baldwin on the hop crop of the world materially raises the figures from Consul William Bardel, of Bamberg. Mr. Baldwin writes from Nuremberg:

The prospects for a good crop in hops in Bavaria improved beyond expectation during the latter part August and beginning of September on account of the exceedingly favorable weather which prevailed, and hop picking is now going on everywhere.

The well-renowned Bavarian hop-producing districts of Spalt, Au, Wolnzach, Mainburg, and Pfaffenhofen had a most excellent crop, viz, about the same quantity as last year, and, besides, the product is of

excellent quality—small hops, with fine ribs, full of flour, and quite aromatic. Baden and Wurttemberg had less than last year, but the quality of the hops picked so far gives general satisfaction. Bohemia had a very bad crop with regard to quantity, as can be seen from the tabular statement given below, but the quality of the Saaz hops, especially those from the Goldbachthal, is grand. Here, too, the splendid weather which prevailed during the last four weeks exercised its favorable influence.

After Bohemia, England and Belgium will, as regards quantity, show very bad results compared with last year. The reason for this deficiency is said to be due to the tree lice in the month of June, which brought about a disease called the blackbrand. Those hop growers who took upon themselves the labor of washing their plants will have good crops, while those who did not may have from 10 to 20 per cent less than last year's crop.

The situation is a little depressing at present for the European hop dealers. As the prices are rather high, it is hardly to be expected that European brewers will fill their orders at present, as they had laid up large stocks last year from which to draw should prices this year become excessive. In northern Germany another reason which harms the trade between brewer and hop dealer is the "beer war" which has broken out lately between the brewers and the beer consumers, caused by the raising of the price of beer by the brewers in consequence of the new tax laid upon beer. The following tabular statement gives an estimate of the world's hop production this year based upon the very latest data:

[In American hundredweight.]

Country.	1906.	1905.	Country.	1906.	1905.
Bavaria	258,500	357,500	France	66,000	78,100
Wurttemberg	55,000	82,500	Belgium and Holland	55,000	121,000
Alsace-Lorraine	88,000	154,000	Russia	60,500	110,000
Baden	27,500	41,800	England	330,000	704,000
Remainder of Germany	29,700	69,300	America	629,200	554,400
Total Germany	458,700	705,100	Australia	16,500	16,500
Bohemia	121,440	354,860	Total	1,820,940	2,746,260
Remainder of Austria	83,600	105,300			
Total Austria	205,040	457,160			

POOR OUTLOOK IN ENGLAND.

The London Financial Times states that the reports from the southern counties in England indicate that the present season for hops will be an unusually disappointing one. It adds that 1906 has been one of the most extraordinary years in the hop records, owing to the severity of the aphid blight. Where washing was persistently carried on the patience and industry of the planter will be rewarded, but where only partially performed or neglected there will be very small yields, and in many cases total failure. This condition of affairs, the Times states, prevails in English plantations generally.

COFFEE TRADE.

THE VALORIZATION PLAN OF BRAZIL.

SCHEME MADE PLAIN—WHAT IT MEANS.

The valorization plan in regard to coffee in Brazil seems not to be fully understood in the United States. In answer to inquiries asked for further instruction in regard to the matter the following, though in the nature of a repetition, is given:

The object of the coffee valorization plan is to maintain coffee at a remunerative price to the grower by establishing a minimum quotation at which it is to be upheld by purchases of coffee on account of the three coffee States concerned. The interest on the maximum loan of \$75,000,000 (gold) is guaranteed and paid by a tax on every bag of coffee shipped, and the proceeds of the loan, it is proposed, are to be held in gold, against which paper money is to be issued, convertible into gold on terms to be set by Congress.

The valorization act passed the Congress of the State of Sao Paulo in June, the States of Rio and Minas in July. Congress approved and the President signed the act early in August, except as to the establishment of a department of currency issue, which he declared could only be established as the result of a direct act of Congress. Legislation to provide such a currency department has already progressed to the extent of the passage of a bill on first reading by the lower house of deputies.

The three contracting States bind themselves to maintain in the native markets a minimum price of 32 to 35 milreis per bag (gold milreis=54 cents—paper and silver fluctuate; paper milreis=33 cents) of 60 kilos (kilo=2.20 pounds) for the first year. This price is on the basis of No. 7 American standard, and the range is intended to cover differences in conditions, such, for instance, as the distance from the bonded warehouse. The price is to be gradually raised after the first year to a maximum of 40 milreis, according to the requirements of the market. For grades superior to No. 7 prices are to be proportionately higher and will be raised when No. 7 is raised.

The contracting States bind themselves to restrict or discourage by discriminating taxation the exportation of coffee of inferior grades. They also bind themselves to further the development of the present markets for Brazilian coffees and to open up new markets, and to eventually establish national standards of coffee and create coffee exchanges. They further bind themselves to impose a surtax—at first at least 3 francs (about 60 cents) per bag—on all coffee exported, such surtax being subject to increase or decrease as the condition of the foreign markets may seem to require. This surtax is to be collected by the Federal Government if the latter gives security for the loan; otherwise it will be collected by the three States. The proceeds of the surtax will be devoted to the payment of interest, the amortization of the loan, and will provide the capital required for the execution of the agreement. The three States further bind themselves to pass laws preventing the extension of coffee acreage for two years after January 1, 1907, when the present law of the same character expires.

The carrying out of the agreement is to be intrusted to a committee of three members, one from each State, who shall select a fourth member to act as presiding officer. This committee will apportion the benefits derived and burdens incurred under the agreement in accordance with the amount of the surtax contributed by each State. The contracting States agree to accept the President of the Republic as umpire to adjust any differences they can not mutually adjust.

ARRANGEMENTS MADE FOR ITS SUCCESS SAID TO BE IMPRACTICABLE.

The New York Journal of Commerce, in speaking of the Brazilian coffee valorization plan, says that it learns from a responsible source that the practical operation of the plan has been arranged so that the announcement may be expected any day.

That journal says that it is generally understood that the \$75,000,000 loan authorized by the valorization act is not to be financed all at

once, and that instead of being furnished by a single bank the funds as needed are to be provided by a syndicate of American and continental capitalists, who will make advances on actual coffee; in other words, it will have, aside from the Government's guaranty for the money loaned, actual collateral to the full amount of the loan at a price below the market figure now current. This collateral coffee, it says, instead of being taken out of the market in Brazil and stored in that country will be stored in New York and on the Continent, and will represent a collateral that can be readily turned into cash in case the Brazilian Government defaults on its obligations.

The Brazilian Review of recent date says:

Whether the estimates are trustworthy or not we do not pretend to decide. It seems difficult to understand how, with so gigantic a crop and possibility of more to come, the governments of the three coffee States can persist on so adventurous a policy with so light a heart.

To keep the visible supply down even to its present level it would therefore be requisite to buy nearly 5,000,000 bags and to reduce it to 40 per cent of consumption, the ratio at which prices are said by the defenders of the scheme to rise over 60 francs, over 8,000,000 bags would have to be bought and be kept off the market, which at 32\$000 would cost 260,000:000\$, equivalent at 15d. to over £16,000,000 during a single season.

However plausible the scheme may have seemed with crops of 10,000,000 or 11,000,000 bags, it is difficult to see how the most sanguine can expect anything but disaster to follow any attempt to bolster up prices by artificial means with such a crop as this to be dealt with.

JAVA AND SUMATRA CROPS.

CULTIVATION OF INFERIOR BERRY INCREASING.

A report from Consul B. S. Rairden, of Batavia, states that the Dutch colonial government of Java is gradually getting out of coffee cultivation, and that the cultivation of Liberia (an inferior grade) is increasing. The consul furnishes the following coffee production statistics of the islands of Java and Sumatra:

Java and Sumatra crops of coffee in 1904 amounted to 47,747,240 pounds, divided as follows: Private Java, 16,013,720 pounds; private Liberia, 18,309,280 pounds; Government Java, 9,341,384 pounds; Government Liberia, 4,082,856 pounds. Of the foregoing figures the Sumatra crop amounted to 4,338,400 pounds old Java and 244,800 pounds Liberia. Prices of coffee, according to grades, average from 11 to 14 cents per pound. One of the finest grades is Kroe coffee, raised in a district of that name in Sumatra; in fact, the finest grades of coffee are raised in Sumatra, Padang being the chief port in the coffee district. During 1904 there was exported to the United States some 12,764,367 pounds of coffee, which was somewhat above that for 1903.

RUBBER INDUSTRY.

BELGIAN IMPORTS.

EFFORTS TO REGULATE AMOUNT OF AND TO IMPROVE PRODUCTION.

Consul-General G. W. Roosevelt reports efforts effectually to increase the quantity and quality of Kongo rubber output. He puts the importation to Belgium in 1905 from the Kongo country at 9,773,735 pounds;

in 1904 at 10,391,960 pounds; from other countries the amounts were 2,796,466 and 2,288,524 pounds. No very large increase is looked for. The foregoing is taken to be about an average yield. He writes:

The efforts of rubber growers, specially directed toward improving the quality of their product, have netted noticeable results. The best rubber comes from the districts of Kasai, Equator, Lomami, Uele, and Mongala. Rubber planting is annually increasing throughout these districts. During the past year about 2,450,000 rubber trees or vines were planted jointly by the State, societies, and private individuals, which bring the number of trees now under cultivation up to about 12,500,000, or very nearly the number established by law. The oldest of these plantations will not, however, be productive for several years. The world's annual production of rubber is put at 75,000 tons.

PRODUCT OF BRAZILIAN FORESTS.

OUTLOOK UNCERTAIN BUT EXCEEDINGLY HOPEFUL.

Consul-General G. E. Anderson, of Rio Janeiro, is of the opinion that a boom is on in rubber in the Brazilian forests and markets. He reports a movement on the part of the large coffee planters toward rubber production. He writes:

There is a boom on in rubber. Several large companies are being formed in London for operations in Brazil, and some of the large coffee planters in this country are paying some attention to the development of rubber gardens on their estates. It is only natural to expect that the boom will go too far and that some investors are likely to lose money before normal conditions are reached. At the same time conditions seem to justify the greatest optimism in the rubber business. The rise in the price of the high-grade Para variety has been very rapid in recent months, increasing from about 95 cents to \$1.15 and then to \$1.40 a pound within three months. So far as market indications go, the only reason for this increased price was in the increased demand for the product. It would be difficult to find a better reason or one upon which industrial interests could more safely rely. The demand for rubber for the construction of automobile and other tires is in itself one of the dominant features of the transportation as well as the rubber business, and there is no indication that there will be any decrease, but an increase in this demand. There is a very material increase in the supply of rubber in sight, not only from the development of rubber gardens, but in the further development of wild-rubber properties in the Amazon country, and it seems probable that there will be protection for the public both against a scarcity of rubber or any attempt to corner the world's supply.

The prospects of the rubber business are excellent and the only thing to be considered in it is lest the prospect be too bright for conservative handling. Improved methods of manufacturing rubber are counterbalancing in some degree the increased cost of the raw article. It is doubtful if there will be justification for any material advance in the price of manufactured rubber goods. Entries of rubber at the Para and Manaus custom-houses this season average about 1½

per cent more than for the same period last year and about 15 per cent more than the season of 1904-5, the record for the two ports for the first six months of this year being 34,490 tons.

WOOD SUPPLY.

WORLD DEMAND INCREASING.

A SERIOUS PROBLEM TO MEET THE INCREASING DEMAND.

Consul William C. Teichmann, of Eibenstock, reports concerning the world's supply of wood to the effect that the demand, instead of diminishing, as was expected, when coal came in as a substitute for wood, has gone on increasing until the question of a continued supply to meet the present rapidly increasing rate of consumption is a very serious problem.

The coal mines of Belgium, according to Consul Teichmann, called for 1,742,740 square yards of wood for the various purposes to which wood is put in mines in 1903. Each year a renewal of old supports is taking place, and new ones are being put into new galleries. Railroads eat up enormous quantities of wood in cross-ties. Add to these wood for excelsior, or wood-wool newspapers, bags, etc., and one will have tons running into the millions each year. The following table is designed to show the importations of wood into the countries named:

	Cubic yards.		Cubic yards.
England	16, 342, 600	Italy	915, 148
Germany	11, 766, 667	Denmark	849, 630
France	8, 496, 300	Spain	392, 222
Belgium	1, 897, 777	Switzerland	313, 778

EXPORTATION OF WOOD.

	Cubic yards.		Cubic yards.
Russia ^a	9, 544, 074	Finland	4, 340, 451
Sweden	8, 328, 180	Norway	1, 961, 110
Austria-Hungary	6, 929, 260	Bosnia-Herzegovina	542, 574

NEW WOODLANDS.

North America, Siberia, Africa, India, China, Korea, and South America still contain great unutilized and almost unknown forests. Nevertheless, it would be well not to exaggerate the dimensions of these wood supplies. Many African forests are really composed of nothing better than thin bushes, and Siberia is already being systematically subjected to deforesting, which will also begin in Korea in the near future.

North America, however, once the possible wood storehouse for the world, has not enough wood to supply its own demand, notwithstanding its 506,555,000 acres of wooded area. Even now it is dependent upon Canada, which, with its 798,133,000 acres of forests, represents

^a Exclusive of Finland, Province of Russia.

probably the largest single area of any country in the world. Canada sends its entire surplus to the United States. Although large territories of forests, especially in China, Korea, India, and South America remain to be utilized, it is certain that the question of the future wood supply of the world, now attracting the attention of economists, will continue to excite great interest. The continuation of the present wood consumption, without comprehensive reforestation, will, within a century at the latest, result in a great and very important scarcity of the wood supply.

GERMAN LUMBER DISCRIMINATION.

SPECIAL FREIGHT TARIFF AGAINST THE AMERICAN PRODUCT.

Vice-Consul Frederick Hoyeremann writes from Bremen that in a report on the "German market for American lumber," by Henry W. Diederich, then American consul at Bremen, the attention of American lumber and timber shippers was called to the fact that, under the rules of the Prussian railways, a special and higher rate of freight was collected on American pitch pine, yellow pine, hickory, and black walnut for inland transportation than charged for wood coming into Germany from European countries.

In this report it was further stated that, inasmuch as nearly all the railroads engaged in this transportation were owned and managed by the Government, this special freight tariff was virtually a discrimination against American lumber. As the new German tariff law went into effect on March 1, 1906, it may be of interest to lumber shippers to know that, although the import duty on hard lumber has been increased considerably, no change has been made in regard to this special freight tariff.

According to information obtained from a prominent lumber merchant the following railroad freight rates are now charged: From Bremen to Osterrode, Harz, in 10-ton loads, American maple, \$0.283 per 100 kilograms (kilogram, 2.20 pounds); European maple, \$0.192 per 100 kilograms. From Bremen to Detmold, in 10-ton loads, American oak, \$0.245 per 100 kilograms; European oak, \$0.173 per 100 kilograms (with the exception of Roumanian and Russian oak, which pay the same rate as American). From Bremen to Hamburg, in shipments of 10,000 kilograms or more, American walnut, \$0.158 per 100 kilograms; Turkish or Bulgarian walnut, \$0.112 per 100 kilograms. From Bremen to Bielefeld, in 10-ton loads or more, American ash, \$0.221 per 100 kilograms; Hungarian ash, \$0.157 per 100 kilograms.

By the new German tariff laws the import duty on hardwoods has been raised from \$1.14 to \$1.37 per cubic meter (=35.314 cubic feet).

DOMINICAN HARD WOODS.

COST OF PROCURING VALUABLE TIMBER ON THE ISLAND.

Vice-Consul A. W. Lithgow, writing from Puerto Plata, says that there are various valuable hard woods to be found on the island of Santo Domingo.

Those chiefly exported are cedar, mahogany, *lignum vitae*, lancewood, fustic, greenheart, and mora. The largest diameters procurable are, in cedar, 60 inches; in mahogany, 35 inches, and in *lignum vitae*, 10 inches. On the northern side of the island quantities of large timber can be procured about 10 miles from the railroad. It is expensive to draw out the wood, as there are no roads, and paths have to be cleared through the forests. The people usually drag the logs with bulls, but the more intelligent use two large wheels on an axle, on which they hang the timber. Roads could be made in the woods for wagons, but as this would be expensive it would all depend on the extent of the enterprise.

In some sections there are rivers on which the logs may be floated, but one has to wait for a freshet, which often delays three years. The facilities and price of getting out the wood depends entirely on the location. Where one owns the trees, the medium cost of felling, squaring, hauling from forest, railroad freight, and delivering alongside ship is about \$30, American money, per 1,000 feet (mahogany or cedar). Trees can be bought standing at from 25 cents to \$1 per tree, depending on the size, condition, and location. It is preferable to purchase the right to fell over an extent of land, first going over same to estimate the amount of timber that can be gotten out, or one can buy it at the rate of \$5 per 1,000 feet.

A foreigner who attends to his own business is perfectly safe, both in life and property. The only inconvenience that would be experienced is that his laborers will leave him when a disturbance is going on in the district where he may be working to avoid being impressed, either in the Government or revolutionists' ranks. After this danger is passed he will return to his work. For this kind of work laborers can be procured at \$1, American, per day. The price of labor is higher in this class, for it is considered harder than the ordinary run and as requiring more skill.

MARKET FOR WINDMILLS.

AUSTRALIA.

AMERICAN-MADE MACHINES THE BEST AND SALES INCREASING.

Special Agent Harry R. Burrill writes from Fremantle, Western Australia, giving the results of his investigation as to the use of windmills in that country. American windmills control the markets of Western Australia, although their prices hold firm at 20 per cent higher than those of the Australian-made article. No windmills other than those manufactured in the United States are imported into that State, and because of their quality, strength, and durability they have attained such widespread popularity that the possibility of their being displaced by those of European or even Western Australian make appears exceedingly remote. Mr. Burrill adds:

The geared mills are uniformly preferred, although a small percentage of power mills may be found. The small demand for the power mills is doubtless largely attributable to the excess of cost, for they

perform their work to the satisfaction of those who have installed them, and, in point of workmanship and efficiency, are not regarded as inferior to the geared machine. Windmills are utilized principally in Western Australia for irrigating and domestic purposes, but in the northern part of the State they are extensively used for keeping on hand supplies of water for cattle. While with cattlemen, as is the case with others making use of the windmill, the cost of installation and operation is of prime importance, owners of herds will not permit the question of a few dollars, more or less, to stand in the way of securing an article that may be depended on to provide an abundant and permanent supply of water for their stock. An inferior windmill might fail at the most inopportune time to do its work properly, entailing serious loss, and cattlemen have long since ceased to be "penny wise and pound foolish" where the initial cost of the windmill is concerned.

Mills used for this purpose are usually installed in comparatively remote regions accessible only by rough country roads. Cartage is expensive, and the hauling of fuel for power machines would be an expensive item. The method usually employed is to erect water tanks with a capacity from 1,000 to 20,000 or more gallons, and connected with these tanks is a large watering trough for the use of the cattle. This trough is prevented from overflowing by the necessary mechanical contrivances, but it is always sufficiently filled with water to supply, when required, the needs of a thirsty herd. The windmills utilized for this purpose are inexpensively operated without the use of engines.

UNSUCCESSFUL IMITATORS.

Australian manufacturers have attempted to copy American windmills with a view to producing an article which will enable them successfully to compete with those imported from the United States, but up to this time, according to the dealers of Perth and Fremantle, they have made a signal failure. Because of either the use of a cheaper material or poorer workmanship or both the Australian windmill cannot stand up against a wind velocity with the American-made article, and in other respects it is regarded as distinctly inferior. For these reasons, and notwithstanding a difference in price of approximately 20 per cent in favor of the Australian windmill, the demand continues strong for the mills manufactured in the United States, and the outlook for a steadily expanding market is encouraging. American windmills, while they control the market, are in keen competition in Western Australia; but the rivalry is a good-natured one, and no importer can be found here who will depreciate the value of a competing windmill. He may try to demonstrate the superiority of his article, but not at the expense of a similar one manufactured in the United States.

The dealers of Western Australia are, however, unanimously of the opinion that if the American manufacturers desire to maintain their supremacy there should be no decrease in the weight or strength of the windmills now exported and all parts of the machine should be as simply made as possible. These precautions they regard as absolutely necessary and, while they do not apprehend any pronounced departure from the present style of manufacture, they wish to sound a note of warning for fear that the continued and growing popularity of the American windmill on this market may induce carelessness in construction or

provoke a tendency to cheapen the material. With the standard maintained, American predominance in the windmill trade of Western Australia is assured. The sales are increasing annually, but the demand is for the better and, of course, more costly windmill, while there has been a corresponding falling off in the inquiries for the lower grades. When the stronger, heavier, American windmill was put on the market it immediately created the favorable impression that it still holds and all attempts of local manufacturers to dislodge or supersede it by imitation have failed.

VALUE OF PROPER PACKING.

As a usual thing American exporters pack the windmills properly and they arrive here in good condition. Isolated cases of careless packing might be cited, but complaints are few, for the home shippers are evidently fully informed as to the requirements for the long voyage and but infrequently fail to provide sufficient protection for the goods.

In sharp contrast with certain other American commodities imported into Western Australia windmills are usually shipped according to specifications and at the time designated in the order. The importance of such action on the part of the American exporter and the necessity for cordial cooperation between manufacturers and importers can not be too strongly emphasized in order to maintain and develop this market, and the disposition thus far manifested has been especially gratifying to the dealers of this State.

The customs duty is at present $12\frac{1}{2}$ per cent on the complete windmill, and it is not believed that the Federal Government contemplates its increase, at least for some time to come. In addition to this, the wharfage charges are 3s. 6d. a ton, and the cartage costs about 1s. 6d. a ton. The gratifying position held by the American windmill in the Western Australian market shows conclusively that quality is a prime requisite to success, and that in the necessities of life (for so windmills may be regarded in this country) a higher price is uncomplainingly paid if the goods be up to the standard established by the manufacturers of the United States.

INDIA NEEDS WINDMILLS.

THE AMERICAN ARTICLE WOULD EFFECT ECONOMY.

William H. Michael, consul-general at Calcutta, reports that there is a wide field in India in which the windmill can be profitably used in lifting water for irrigation. This letter reads:

A careful investigation into the relative cost of lifting water by windmill and by bullock power shows that the former is much more economical and satisfactory. A 16-foot windmill mounted on a 40-foot tower and fitted with an 8-inch pump will cost, when erected over a well, about \$500, and we may assume that the cost of maintaining the same in good order will be about \$2 per month. Such investments should yield about 6 per cent interest on the capital expended, or \$2 a month. Ten per cent for depreciation is perhaps an excessive amount to allow, but it will be well on the safe side if we do so. This comes to \$4 a month, making the total cost of the windmill \$8 a month.

Now this windmill will do as much work as at least two pairs of good cattle, and if fitted with two pumps it will be equivalent to three pairs

of cattle, and the cost of lifting water with them will amount to from \$15 to \$23.50 a month, showing a margin in favor of the windmill of from \$6.65 to \$13.30 a month. This demonstration was made in Madras, which, perhaps, is not the most favorable place in India to conduct experiments of this kind. The larger territory in India where the wind engine, such as are made in America, or in fact anywhere else, would show better results is outside of Madras Province, on account of being higher and more open. The manufacturers of windmills in the United States would, I think, find a profitable field in India for their engines; and it would pay them to combine and share the expense of exploiting the field by sending a capable and pushing agent to India for that purpose.

NEW INVENTIONS.

STREET LIGHTING BY CLOCKWORK.

AN AUTOMATIC GAS CONTROLLER INTRODUCED IN ENGLAND.

Consul Albert Halstead, of Birmingham, reports that an automatic gas controller has been patented and is now on sale in England which might materially lessen the cost of public lighting in the municipalities of the United States if in practical operation it fulfils the claims of its owners.

The controller is said to be adaptable to any type of incandescent burner, to fit any lamp, and to be instantaneous in its lighting and extinguishing. The mechanism consists of a clock which can be so set as to light the gas each night and extinguish it each morning, so as to make an automatic variation of the time of lighting and extinguishing according to the calendar. In short, by means of a chart, the street lights are turned on and off, lighted and extinguished, at a different moment each day throughout the year, according to the season. This is an advantage, it is claimed, over any other controller now on the market, one adjustment a year being sufficient.

It is claimed that they would require no attention except winding once a week or a fortnight, and that once set would not have to be reset throughout the year. The gas can be turned on and off in the ordinary way, quite independent of the gas controller. This is important, as it might be necessary to turn off the gas for the renewing of the incandescent mantles.

These controllers are now on trial at Bath, and the engineer of the gas company there informs the municipal gas department in Birmingham that so far as their experience goes it gives satisfactory results. In the city of Birmingham proper there are 13,860 street lights, and in the district outside which is supplied by the municipal gas department of Birmingham there are 7,108 street lights, their caretaking costing \$102,488 per annum. To equip these street lights with this gas controller would involve an expenditure of \$153,061. The cost of operating, it is claimed, would be just one-half. The price of a controller is now \$7.29.

The question arises whether the system could give entire satisfaction no matter how carefully each clock was made, because of the almost insuperable difficulty of so regulating them as to make each keep exact

time. It is possible that climatic changes and such extreme variations of temperature as occur in the United States might prevent this ingenious system of automatic lighting and extinguishing of street lights from being successful because of the failure of the clockwork mechanism to keep correct time.

DIVING MACHINE.

AN ITALIAN'S INGENIOUS DEEP-SEA MECHANISM.

Consul J. J. Brittain, of Kehl, reports that Joseph Restucci, a mechanical engineer of the Royal Italian Marine, has recently invented a new diving machine, which has proved a success in experimental tests made with it in deep-sea diving.

The machine is constructed of iron 1 centimeter (three-eighths of an inch) in thickness, and is large enough to contain a man standing upright, leaving him a certain amount of liberty of movement. The form of the machine is cylindrical, with the upper part shaped like a spherical hood. The front of this hood is furnished with magnifying glasses to permit of exploring the bottom of the sea.

Two especially ingenious arms in bronze are attached to the machine, the forepart of each being articulated, to enable them to take the place of human arms. The right arm is terminated by a hand possessing fingers, which work exactly like the fingers of a human being. The left arm is finished with a pair of scissors and nippers. The interior of the machine contains a small electric lamp, capable of illuminating a certain space under the water. The diver communicates with the ship escorting him by means of a telephone. A special arrangement for furnishing air permits him to remain under water for a long time. The Restucci machine has already proven its value, for by means of it a Russian ship with a large amount of gold on board, sunk near Bala-klava during the Crimean war, has been discovered.

NEW ELEMENT DISCOVERED.

REMARKABLE RESULTS OF CHEMICAL EXPERIMENTS.

Consul R. S. S. Bergh, of Gothenburg, reports the discovery of a new element by a Swedish scientist. He writes:

It is reported that J. R. Rydberg, professor in physics at the university in Lund, Sweden, has a new theory about chemical elements. In working on the same he came to the conclusion that there must be an element having less atomic weight than any element heretofore known, in fact, only a small fraction of the atomic weight of hydrogen. It is further stated that such an element, the electron, was known before, but that Professor Rydberg has discovered that it does not consist of any separate kind of material. It is thought that the consequences of this will be very important, and will lead to the discovery that metals are not simple elements but are composed of electrons. It will follow, also, that electron— as the new element is called by Professor Rydberg—is a universal gas, which at all events forms an atmosphere which prevails throughout our solar system. It is also expected that the new discovery will lead to full scientific explanations of many things which up to date have remained doubtful or unexplained, as, for instance, the magnetic storms in connection with the sun-spot periods, the northern lights, the terrestrial magnetism, etc.

ARTIFICIAL RUBBER FROM CEREALS.

Consul F. W. Mahin reports from Nottingham that according to a current newspaper item an inventor named Carr, in Middlesex, proposes to make artificial rubber from cereals—wheat, corn, etc.—for use as bicycle and automobile tires, and also as golf balls.

It is explained that the artificial rubber is obtained by treating any cereal with phyalin. It is reported that a syndicate of capitalists, interested in tire manufacturing, has offered Mr. Carr £250,000 (\$1,216,625) for his patent rights. The inventor's response is not stated. Mr. Carr, it is announced, proposes to make six grades of artificial rubber from a liquid solution suitable for waterproofing to a hardness available for golf balls. In the latter the substance is credited with the lightness of cork and the toughness of chilled steel. The intermediate grades are expected to be serviceable for tires, tubes, linoleum, and slabs or sheets for pavements.

FIRST TRANSPORTER BRIDGE IN WALES.

Consul D. W. Williams, of Cardiff, writes that the first transporter bridge in Wales was opened at Newport in September. This style of bridge, which is in fact a suspended ferry, was patented by the French engineer M. Arnodin and is intended for use on navigable rivers. The first was built at Rouen across the Seine, and there is one at Manchester, in England. The Newport bridge has a span of 645 feet and a clear headway from high water of 177 feet, to admit of the passage of the tallest masts at any time. The traveling truck, which is 104 feet long, is electrically lighted and propelled. There are 30 suspension cables, with a total length of 1,620 yards and a breaking load of 550 tons. The bridge has been tested with a load of 120 tons. Its building occupied about four years and it cost nearly \$365,000.

NEW ELECTRIC LAMP.

The "Osram" electric lamp is a new invention on the German market undergoing test. It replaces the carbon filament for glow lamps by fine wires of wolfram, which are claimed to employ only one-third of the energy heretofore required. A test at Charlottenburg showed that after use of 1,000 hours there was an average loss of brilliancy of 6.3 per cent in the case of 25-candlepower lamps and 3.6 per cent in the 32-candlepower lamps. Of the sixteen lamps under test eleven were not damaged, and capable of continued use. This new lamp shares with the Osmium lamp the drawback that it can only be used hanging downward, but a technical writer says that it may be assumed with certainty that this disadvantage will be overcome.

NEW POSTAGE-STAMP MACHINE.

Consul G. E. Eager, of Barmen, reports that an engineer of Frankfurt has invented an automatic postage-stamp selling machine which not only sells the stamps but sticks them on the letter.

The machine possesses the additional advantage of being impossible to rob. As the German Government post-office has for sometime past been seeking a satisfactory stamp-selling automatic machine, Herr Becker's patent is being subjected to a series of trials with a view to its ultimate adoption.

PIANO MARKETS.

INDIA.

CALCUTTA DEALERS SAY AMERICAN INSTRUMENTS DO NOT SUIT CLIMATE.

Consul-General William H. Michael, of Calcutta, is in receipt of an inquiry from a New York firm of piano manufacturers desiring information about that line of trade in India. The firm state that they "are much enthused over the Daily Consular and Trade Reports, which they receive constantly, and would like to get their line represented in India." To this letter Mr. Michael replied as follows:

There are several dealers here of about the same importance, all doing a large trade in sales and renting. The renting of pianos in Calcutta, and perhaps in other large cities in India, is a large and important feature of the piano business. Europeans come and go, and rather than purchase a piano they rent by the month or by the year. The dealers rent pianos and agree to keep them in tune and to look after them for so many rupees (rupee = 32.4 cents) per month. The rentals range from 12 to 50 rupees per month, according to the class of instrument. An average-priced instrument, of good make and tune, rents for 25 rupees per month, which includes tuning and repair.

When I came here I visited several different piano houses and tried to rent an American-made piano. I was told that I would hardly be able to get a satisfactory American-made instrument in the city. I asked the reason why, and was told that American instruments were no longer handled by dealers in Calcutta. The explanation was that American pianos were found to be unsuited, owing to their construction and the materials used in their construction, to the climate of India. The dealers said that American goods have been tried and found to be unsuited, and that English and German manufacturers had investigated the needs of India in respect to musical instruments, and were building instruments that met the conditions so well that dealers no longer paid any attention to American-manufactured instruments.

The statement is that the wood material used yields too readily to the humid climate of India and that the construction is faulty. One particular referred to was that the keys were too close together, and other parts so constructed that the inevitable swelling of wood made the piano useless; also that the sounding board was not made in such a way as to resist the effects of the continued dampness.

American manufacturers, of course, could do precisely what European manufacturers have done, and probably do still better, as has been done in other fields. The country is so large and so inviting that it is worth considering. [Names of the principal piano dealers in Calcutta can be obtained from the Bureau of Manufactures.]

BRAZIL.

TARIFF CONCESSION SHOULD BE EMBRACED QUICKLY.

It seems to Consul-General G. E. Anderson, of Rio de Janeiro, that the American piano manufacturers have not appreciated the opportunity for the introduction of their instruments into Brazil which is

offered in the 20 per cent reduction in duty on pianos entering Brazilian ports from the United States. Mr. Anderson continues:

This is a preferential reduction which the United States alone enjoys. It means just that much advantage over the piano manufacturers of all other countries at the present time. When there is considered in this connection that the Brazilian people are a very musical people, that they naturally take to musical instruments of all kinds which are within their reach, the importance of prompt action ought to be understood. Of the several items in the Brazilian tariff schedule upon which this preferential reduction is made I believe that the one for pianos is the most important. Counting the more or less hostility from the representatives of other nations in the trade in other articles preferentially listed and the nature of the reduction itself, I believe that the concession really means little as a whole. But there is at present practically no trade in American pianos in Brazil, while the piano manufacturers of the United States are making goods which I believe can be sent here and sold in direct competition with European goods upon the same tariff basis. That the United States has the benefit of a discrimination of 20 per cent in its favor on such goods manufactured by it is additional reason for expecting successful results from a trade campaign.

WHY AMERICAN PIANOS ARE NOT LIKED.

The pianos now sold in Brazil are costly and as a rule run to very poor instruments, although some of the best instruments in the world are imported. American pianos do not suit the Brazilians in size, shape, finish, or decoration. American pianos as a rule are too large and heavy. The average piano sold in Brazil would seem to the average American very much like an old-fashioned harmonic-hord. One reason why small and light pianos are preferred is in the difficulty of transportation, which is yet something to be considered, especially in trade which reaches to the interior cities and country homes. There is also a demand for more ornate decoration for pianos than is usual with the American product.

The import duties on pianos in Brazil are very high, being \$109 to \$175 gold, depending upon the size, style, and nature of the piano, whether it is imported in a complete or partially complete condition, and similar points. The local trade, of course, understands the most advantageous way of importing goods.

The last year for which customs returns in Brazil are to be had shows a total import of pianos of about \$165,000, as compared with about \$135,000 the year before. Of these imports Germany furnished about two-thirds and France one-sixth. The total imports of musical instruments of all kinds were \$260,000, as compared with \$235,000.

[A list of the Rio de Janeiro dealers named by the consul-general can be secured from the Bureau of Manufactures.]

ALCOHOL.

DENATURED PRODUCT.

AUSTRIAN REGULATIONS AND PROPOSED NEW FORMULA.

A report from Consul-General W. A. Rublee states that denatured alcohol was introduced in Austria about sixteen years ago.

Since that time a considerable effort has been made to stimulate its use, and the total consumption reached 11,095,161 gallons in 1905, of which amount 6,340,092 gallons were consumed in Austria exclusive of Hungary, and 4,755,069 gallons in Hungary. Special action was taken to increase the use of denatured alcohol by holding an elaborate exposition in Vienna two years ago for the purpose of illustrating all the uses to which denatured alcohol can be put. This exposition had a very great educational value, but the results in bringing about a more general use of denatured alcohol have hardly met the hopes of its organizers.

There has been, to be sure, some further introduction of denatured alcohol for industrial purposes, and it is also somewhat more generally used for lighting purposes, but the progress has been slow. It is not used at all as a fuel for automobiles, except by one or two manufacturers of denatured alcohol, who burn it in their own machines. The cost is too high as compared with benzine, the fuel with which automobiles are run in Austria. The wholesale price of denatured alcohol in Vienna at the present time is quoted by manufacturers as 31 crowns (\$6.20) per hectoliter (26.417 gallons) of 90 per cent alcohol and 33 crowns (\$6.60) per hectoliter (26.417 gallons) of 95 per cent alcohol. The retail price is about 42 heller (8.5 cents) per liter (1.056 quarts).

DENATURING METHODS.

The denaturing process in Austria is founded on the denaturing mixture at present still in use in Germany, which consists of 2 per cent of pyrolignic acid and one-half per cent of pyridine. With a view to easier control, phenolphthalein in the form of a solution of pyrolignic acid was added to this mixture, so that the denaturing agent at present prescribed is the following:

To 100 liters absolute alcohol, $2\frac{1}{2}$ liters of a mixture of 25 volume parts of pyridine bases, 100 volume parts of pyrolignic acid, and 1 volume part of a 10 per cent phenolphthalein solution.

The alcohol denaturized by this general denaturing agent must, when brought into circulation, have at least 90 volume per cent, and in the retail trade may be furnished only in sealed and labeled bottles. Besides this general denaturing agent there is a series of allowable denaturing agents for industrial purposes, which may be applied if their manufacture is under special control and the denaturing agent is in each case tested as to the prescribed quality. As examples of such denaturing agents may here be cited: Oil of turpentine, soap, animal oil, benzole, vinegar (for the manufacture of vinegar).

For motor alcohol a special denaturing process was introduced in 1903, as follows: To 100 liters of absolute alcohol, 5 liters of benzine or benzole, one-half liter ketonic oil or pyridine, 0.2 gram of methyl violet dissolved in 20 cubic centimeters of alcohol.

PROSPECTIVE CHANGES.

At present the matter of improving the general denaturing agent is being thought of in Austria, but the discussion of the subject is not yet closed. As principles for the composition of the new mixture the following are, it may be affirmed, already adopted: The new denaturing agent must be cheaper than the old; it will consist of a whole series of substances to make denaturing more difficult; a part of the denaturing mixture will be prepared by the Government and furnished by the same; its composition is to be kept a secret and changed at will in case of need. It is stated that the mixture which will probably be introduced will be composed as follows:

To 100 liters of absolute alcohol: (1) To be supplied by the manufacturers—250 grams pyridine, 250 grams benzole, 1,500 grams pyrolignic acid, with 40 per cent ketonic oils. (2) To be added by Government officials—a mixture of chemical reagents of intense smell and easily traced, to a total weight of 102 grams.

HOW FARMERS IN GERMANY OPERATE SMALL DISTILLERIES.

Representative E. J. Hill, of Connecticut, who assisted the Commissioner of Internal Revenue to formulate the rules under which the free-alcohol law went into effect on October 1, spent most of the summer in Europe with Commissioner Yerkes in investigations on this subject. Mr. Hill states that Germany was the country in which the most progress was found to have been made in the direction of applying denatured alcohol for the development of industrial purposes. There are 70,000 farm distilleries in Germany, many of them being very small, and Mr. Hill was asked how the German Government could afford to furnish an inspector to each one of those distilleries. He replied:

“There is no difficulty in that respect. The stills have to be made in a certain way, which includes a tank that can be locked with a Government lock and sealed with a Government seal. The small farm distilleries do not operate all the year round. They operate in the winter when the farmer has leisure to do something other than straight farm work. The farmer has to give the Government thirty days’ notice as to the time he wants to begin to operate his still. Some time during the thirty days an inspector comes along and looks the still over to see that it is clean, etc., and then he locks and seals the tank, after which the still is ready for the farmer.

“He may go ahead and distill until the tank is full. Then he informs the person who is to buy the alcohol from him, after which he notifies the Government, and an inspector comes and removes the seal, measures the contents of the tank, and collects the revenue. If the farmer wants to denature the alcohol on the spot he can do so in the presence of an inspector, when the amount of the tax will be returned to him. But generally the farmers sell through the great central selling agencies, which denature at a central point and in large quantities, and collect the rebate from the Government in considerable sums. Thus the Government agents are not required to spend any appreciable time at any one farm, and one inspector can cover a large territory. Meanwhile the central selling agency pays the farmer on the basis of beverage alcohol and rebates for all that is denatured. It is a good system and is not very expensive to the Government.”

SPIRIT FROM CORNCOBS.

The Department of Agriculture is developing a new industry in the production of alcohol from corncobs, which, the Department says, promises to be of much commercial value. Investigations are being made at Hoopeston, Ill., and have proved that the large quantities of corncobs which every year go to waste can be made to produce alcohol in sufficient quantities to justify the erection of a distilling plant in connection with a corn cannery.

So far the Department has succeeded by simple methods of fermentation in getting a yield of 11 gallons of alcohol from a ton of green cobs, and, by similar methods, in getting 6 gallons of alcohol from a ton of green cornstalks. A Department official says that these tests show that there are 240 pounds of fermentable substance in a ton of green field cornstalks, which will yield about half of their weight in absolute alcohol. In round numbers, a ton of stalks will produce 100 pounds of alcohol or 200 pounds of proof spirits. As a gallon of alcohol weighs nearly 7 pounds, there should be 15 gallons of alcohol in a ton of stalks. The addition of the corn on the cob adds further to the possibilities of alcohol obtainable from a ton of cobs, and will have its influence in bringing the quantity to a greater figure.

LABOR MOVEMENTS.

STRIKES IN THE GERMAN EMPIRE.

THE LABOR MOVEMENT IN THE EMPIRE STILL STRONG.

From reports on strikes and "shut downs" in Germany, furnished by Consul E. T. Liefeld, of Freiburg, and Consul C. Karminski, of Seville, the following facts are gleaned:

Consul Liefeld writes that there were 2,448 strikes begun in 1905, of which 2,403 were ended. In 1900 the respective numbers were 1,462 and 1,433. The number of concerns affected in 1905 was 14,481, the number of laborers, 776,984; in 1900, 7,740 factories and 298,819 hands.

It is hardly fair to take such figures to indicate growth, for the movement between 1900 and 1905 has a lot of peculiar features. For example, there were 10,321 factories affected in 1904, with only 273,364 hands, and 3,437 factories in 1902, with 131,086 hands, while in 1901 the number of factories was 4,561, with 141,220 hands.

CAUSES OF THE STRIKES.

The causes for the strikes were wages, hours of labor, and other matters; 2,451 in 1905 for wages, 849 for hours of labor, and 1,744 for other causes; in 1900 the numbers were 1,436, 513, and 820.

Here, too, the tables do not run uniformly. Success was achieved by the strikers in 1905 in 528 cases, partial success in 971, and no change in 904 cases. In 1900 the record ran: Successful, 275; partially successful, 505; failures, 653.

There were 263 lockouts in 1905, affecting 118,665 hands and 3,859 industries. Here the demands of the employers touched wages in 30 cases, hours of labor in 17, and miscellaneous matters in 257. In 65 cases the employers won, in 147 partially, while in 42 they lost.

Consul Karminski says that miners led in the number of strikers, fully 56.7 per cent of all engaged, masons following with 59,893 strikers, or 14 per cent.

There has been double the amount of lockouts in 1905 (263) compared with the previous year (120), affecting five times as many hands (118,665) as in 1904 (23,760), illustrating most impressively the potent influence acquired by the associated capitalists' leagues.

The industries chiefly identified with the lockouts were:

	Idle hands.	Per cent.
Machine shops.....	54,197	45.7
Textile fabrics.....	24,187	20.4
Architecture.....	18,883	15.9
Manufactures of wood.....	5,421	4.6
Tailoring.....	4,543	3.8

EMIGRANTS FOR THE SOUTH.

SECURING NEEDED EUROPEAN LABOR FOR DEVELOPING INDUSTRIES.

A shipload of European emigrants for the Southern States sailed from Bremen on October 18 direct for Charleston, S. C. Concerning this new movement for providing the South with much needed laborers, Consul W. P. Atwell writes from Ghent as follows:

Commissioner E. J. Watson, of South Carolina, who is in Europe endeavoring to turn the tide of emigration to America southward, has been in Ghent at the branch office of his department located here. This branch office has been in operation about one year, and conducted in such a manner as to command the confidence of the Belgian authorities. That Mr. Watson is undertaking work in Europe upon a somewhat broader scope than is usually attempted, and for a purpose that will make the results of his experiments worth studying, may be gathered from the outline given by him to the consulate. Commissioner Watson says:

"I have long been convinced, as has United States Commissioner-General Sargent, that the only practical solution of what is now rapidly becoming the great immigration problem in the United States rests in the selection and direction of emigrants, as far as possible, at their own homes before they are booked and started to America to be dumped into the congested centers of population without the remotest knowledge of country or conditions or where they are to find the kind of work they are fitted for. This has been resulting in the making of paupers and criminals out of good men, who, had they been landed at the door of opportunity and at points from which they could be readily and easily absorbed, would have quickly become useful members of the body politic. The care of the present laws of the United States is simply as to the admission of the immigrant on reaching the great ports. The moment he is admitted he becomes the prey of unprincipled labor sharks.

SELECTING EMIGRANTS FOR THE SOUTH.

“There is a clause in the Federal laws permitting departments of State governments to do the work of selection and distribution at the right place, i. e., before he is booked, and knowing that unless a responsible government undertook this upon practical lines no demonstration as to its value would result, I have undertaken to put our work in Europe upon such a basis that we can send into the South, where thousands can be readily absorbed, carefully selected persons particularly fitted for the work that will be required of them. One of the greatest difficulties has been in the fact that there was no trans-Atlantic steamship line entering a South Atlantic port carrying third-class passengers. During the month that I have been in Europe I have succeeded in having this defect cured, in a measure, by inducing the directorate of the North German Lloyd Steamship Company to make the experiment looking to the establishment of a permanent line between Bremen and the port of Charleston, and the first ship is to sail on October 18. This puts within our grasp the means of carrying the agricultural and laboring emigrant direct to a section in which remunerative work and a good home awaits him, and where he will be directed by officials instead of labor agencies, and have the fostering care of the State itself thrown around him.

“Our operations are to be confined entirely to northern Europe, and in every step that is taken we invite the sanction and approval and the aid, as far as possible, of the United States officials and of the authorities of the countries in which we are working. Our delegates, of whose appointments the several Governments are notified officially through the State Department at Washington, are peremptorily instructed to regard sacredly all laws and to conceal from no one any of their acts. In this way, with the cooperation resulting, we are looking to selection and distribution at one stroke at the port of departure rather than at the port of entry, where, from the nature of things, proper restrictive and distributive work can never be done.”

TRADE IN CANDLES.

GREAT BRITAIN THE CHIEF EXPORTER—POSITION OF UNITED STATES.

We have so supremely passed from the use of “ancient” appliances as commodities that our manufacturers scarcely ever consider anything of trade consequence save the most advanced products; yet a glance at the trade statistics of other countries shows that a fair percentage thereof is made up of what we are likely to designate “crudities”—things which have long ago given way in the United States to up-to-date products, and thereby not worth consideration in our foreign trade estimates. Our foreign trade in candles is a fair example of this.

Although we have a fair export trade in candles, aggregating \$701,000 and \$609,000 in 1905 and 1906, respectively, our manufacturers have paid no particular attention to it, merely supplying the demand which has been created by the worth of this product. While it might not be, perhaps, profitable to incur directly any large outlay

of time or money for the special enlargement of this trade, the exports of our candles could be very much increased by practical efforts in connection with our trade in other products.

If we stop to consider the people who still use candles as a household illuminant and those who would use them if they could be obtained, and to whom they would be great "luxuries," are, to say the least, as numerous as those who use the more advanced illuminants, and that the places of those who pass from the use of candles will be more than made up by those who will advance to the use of candles, thus guaranteeing the stability of the trade, the field assumes proportions well worth the consideration of our manufacturers.

VALUE OF PRESENT TRADE.

In 1905 the exports of candles from the United Kingdom were valued at \$3,178,000. As before stated, the exports of candles from the United States during the fiscal years 1905 and 1906 amounted to \$701,000 and \$609,000, respectively, while the exports from France in 1904, the latest year for which statistics are at hand, were valued at \$1,218,500, making the total export for the three countries in 1905 (France, 1904) \$5,097,500. This, however, gives but a very contracted idea of the consumption of candles, for the first step taken by any country toward the establishment of manufactories is in candles and soap, and there is scarcely any country, save the very rudest, which does not essay to supply its wants in these lines. It is to be regretted that the qualities and amounts of the different qualities of candles exported are not given, official statistics merely designating them as "candles of all sorts."

As the United Kingdom leads in this trade, her exports of candles being at least equal to the exports of all other countries, and as there is no product finding consumption in any market so insignificant as to be overlooked by British traders—which accounts for the greatness and perfection of British commerce—the following statement, prepared from British official statistics, showing the exports of candles to the several countries from the United Kingdom in 1901 and 1905, will give our manufacturers pointers as to where they can hope to increase their trade. For more instructive purposes the exports from the United States during the fiscal years 1901 and 1905 are also given.

The table is arranged as given in the British publications, the countries with which the United Kingdom has no specified trade and with which the United States has trade, following the British arrangement.

Whither exported.	United Kingdom.		United States.	
	1901.	1905.	1901.	1905.
FOREIGN COUNTRIES.				
Belgium	\$99,800	\$72,600	.....	\$800
Portugal	21,000	22,900	.....	.....
Portuguese East Africa	52,100	551,000	.....	223,152
Canary Islands.....	78,900	104,200	\$1,600	.....
Italy	13,700	5,900	.....	95
Turkey	10,700	9,300	.....	.....
Morocco	179,100	187,900	.....	.....
China.....	270,100	737,300	1,328	17,725
United States.....	10,300	14,100	.....	.....
Costa Rica	32,600	20,500	^a 18,000	^a 37,200
Colombia	17,100	17,600	6,200	9,000
Peru	39,400	62,300	501	69
Chile.....	38,500	136,200	52	59
Argentina	14,100	20,500	107	136
United Kingdom .....	.....	.....	103	2,365

^a To Central America.

Whither exported.	United Kingdom.		United States.	
	1901.	1905.	1901.	1905.
FOREIGN COUNTRIES—continued.				
Mexico			\$57,900	\$57,200
West Indies.....			13,200	132,000
Brazil.....			600	1,500
Venezuela			6,100	3,700
Ecuador			5,100	3,300
Dutch Guiana.....			1,300	1,400
Japan.....			4,800	3,100
Korea.....			11,200	7,200
All other foreign countries.....	\$74,400	\$128,800	2,856	5,256
Total foreign countries	951,800	2,091,100	130,947	505,257
BRITISH POSSESSIONS.				
West Africa.....	35,100	50,700	400	.....
Cape of Good Hope.....	873,800	285,200	16,500	90,900
Natal	242,400	207,800		
India	142,600	199,600	.....	.....
New Zealand.....	189,400	157,700	^a 1,500	^a 33,100
West Indies.....	45,300	39,500	4,800	6,500
Canada .....	.....	.....	73,100	56,400
All other.....	125,300	146,200	9,800	9,200
Total British possessions.....	1,153,900	1,086,700	105,600	196,100
Total exports	2,106,700	3,177,800	236,547	701,357

^aTo Australasia.

According to the statement the increased exports of British candles in 1905 were \$1,072,100, or about 51 per cent greater than in 1901, and that while the exports to British colonies show a small decrease, those to "foreign countries" show a large increase.

China leads in the consumption of British candles, followed by Portuguese East Africa (our greatest export is to Portuguese East Africa also), Cape of Good Hope, Natal, India, Morocco, New Zealand, and Argentina.

The exports have been given in detail, that our manufacturers may profit by the lesson of British exports, for it is fair to assume that the consumption of British candles in the several countries is a fair gauge of the increase or decrease in the consumption of candles therein.

The value of the exports of French candles to the several countries is not given in official publications, being entered as follows: Exports to foreign countries, \$455,596; exports to French colonies, \$762,904.

PRODUCTION AND CONSUMPTION IN THE UNITED STATES.

According to statistics, kindly supplied by our Census Bureau, the total production (factory production) of candles in the United States during the fiscal year 1904 amounted to \$3,889,362. Deducting the \$510,183 exported during the same year left for home consumption \$3,379,179, or a little more than the exports of British candles in 1905. If from this is deducted the value of the candles consumed for religious purposes, which must be very large, it will be easily understood how insignificant is the consumption of candles for household purposes in the United States. It may also be stated that our home consumption is entirely supplied by our home product, our total imports of candles and tapers in 1905 amounting to only \$28,145, of which \$10,396 worth was drawn from Germany and \$12,800 from the United Kingdom. By proper efforts on the part of our manufacturers there ought to be no difficulty in running up our foreign candle trade to twice its present proportions at the very least.

TYPEWRITER SUPPLIES.**BEST WAY TO INTRODUCE AMERICAN PRODUCTS IN GERMANY.**

Consul-General A. M. Thackara, replying to an inquirer, points out a way successfully to enter and to establish trade in typewriter supplies, such as ribbons, carbon paper, etc., in the German Empire. Mr. Thackara sent a list of dealers, which is on file at the Bureau of Manufactures and may be had upon application. He writes:

Relative to the possibility of introducing typewriter ribbons and carbon paper into Germany I desire to say that American typewriter ribbons and carbon paper, owing to their excellent qualities, are in good repute in this country. The trade is quite extensive, just how large I can not say, as there are no available statistics which would indicate its volume. By a reliable authority it is estimated that the American products control about two-thirds of the business in Germany.

There is one German factory which makes a ribbon which is almost as good as a high-grade American ribbon, and sells for the same price, but as a rule the German product is not as good as the ribbons made in America. The wholesale price for high-grade ribbons at present is 14 marks 50 (\$3.45) per dozen. As to carbon paper, the American made is far superior to that produced in the native factories. The latter can only compete with the American low grades. The prices are, at wholesale, \$1.50 per box of 100 sheets for first quality and \$1 per box for second quality. The duty on American typewriter ribbons imported into Germany is 120 marks (\$28.56) per 100 kilograms (220.46 pounds), and on carbon paper 110 marks (\$26.18) per 100 kilograms.

German, English, or French commercial travelers and agents of American makes frequently call on the dealers, hear their complaints, rectify any faulty shipments, fill smaller orders than if the dealers had to purchase their supplies direct, present their newest goods, etc.

TRADE AT MARSEILLE.

Vice-Consul-General P. H. Cram, in answer to many inquiries regarding the marks or kinds of typewriter ribbons and carbon paper in use in Marseille, says:

I have found only one mark or kind of French ribbon of inferior quality, which sells at 48 cents each. With this exception, all typewriter ribbons on sale here are of American production and retail at 68 to 77 cents each, or in lots of not less than half a dozen at 58 to 68 cents each. The sale of carbon paper is similarly confined to American marks, and sells at \$1.35 to \$3.86 per 100 sheets, according to quality. Carbon paper pays a duty at the rate of \$6.91 per 220 pounds net, but the tariff applied to the importation of ribbons is so complicated as to make it impossible to obtain a definite ruling from the local customs in relation thereto.

THE LIVERPOOL MARKET.

Consul J. L. Griffiths advises that the American typewriter ribbons have nearly the entire hold of the Liverpool market. It is reported that some German firms intend to undercut the American and English ribbons by introducing a cheaper article, and they are now trying to establish agencies in England. It is anticipated that they will sell their ribbons at about half the current prices. American carbons have not such a hold on the British market as the ribbons, the English manufacturers having made more progress in the manufacture of carbons. The consul names the largest stationery firms in Liverpool, the addresses of which are obtainable from the Bureau of Manufactures,

WORLD'S PAPER CONSUMPTION.

UNITED STATES LARGEST PRODUCER AND PROBABLY LARGEST EXPORTER.

Consul William C. Teichmann, of Eibenstock, advises that the *Revue Scientifique* recently discussed the consumption of paper by the principal nations of the world as reflecting modern progress of civilization because of its extensive use for printing purposes. It places the United States in the front rank as the greatest paper-producing country of the world, with an annual output of 639,734 tons (avoirdupois). Germany follows with an annual production of 393,683 tons, England 246,051, France 196,942, Austria 147,706, and Italy 123,026.

One American corporation is declared to be the greatest paper manufacturing enterprise in the world, possessing 31 factories with 96 continuously running machines, the company using almost as many machines as are operated in Italy and the Netherlands altogether, and its annual production exceeds that of all the paper factories in Austria-Hungary and almost equals that of all the British ones. Its capital amounts to more than \$110,000,000. While America leads in production, Germany has become the largest exporter of this article, with 51,000 tons annually, England following with 49,210, the United States 16,880, and France 13,090. The United States export goes principally to South America, but also to Canada and Australia. Notwithstanding its large production England remains a good buyer, having imported 147,706 tons last year.

Regarding the direct consumption of paper it is an interesting fact that the United States leads with an annual figure of 38.6 pounds per capita, England coming next with 34.3, Germany 29.98, France 20.5, Austria 19, Italy 15.4, Servia showing the lowest European figure, 1.1; India shows only 0.22 and China 1.1 per capita. Nearly half of the paper manufactured in the world is used for printing purposes. Twenty per cent is absorbed in the trades and industries. Almost an equal proportion is applied for official and school purposes. The remaining 10 per cent serves the demand for private use.

GROWTH OF AMERICAN PAPER EXPORTS.

The Bureau of Manufactures may state that figures of the Revue Scientific are inaccurate, in at least so far as they refer to the export trade of the United States in paper. Exports of printing paper alone, which comprised somewhat less than one-half the whole, weighed 41,075 long tons in the fiscal year 1904, 48,374 tons in 1905, and 61,991 tons in 1906. American statistics do not show weights of other paper shipments, but if Germany's exports total only 51,000 tons, this Republic probably leads the world, not only in paper production, but in foreign sales. The United States exported \$7,543,728 worth of paper and its manufactures in the fiscal year 1904, \$8,238,088 in 1905, and \$9,536,065 for the fiscal year 1906, ending June 30. The best customers were as follows:

	1904.	1905.	1906.
United Kingdom.....	\$2,300,803	\$2,259,255	\$2,564,317
British North America.....	1,727,645	2,081,565	2,226,750
Australasia.....	1,052,649	849,404	904,862
British Africa.....	102,887	132,571	104,873
British East Indies.....	56,932	43,161	80,803
Total.....	5,240,916	5,315,956	5,881,105
Germany.....	152,131	175,267	257,436
Belgium.....	76,326	71,682	99,986
Netherlands.....	65,859	89,967	87,126
Central America.....	92,902	141,187	210,045
Mexico.....	512,083	554,629	591,899
Cuba.....	279,524	375,005	429,760
Other West Indies and Bermuda.....	139,240	138,490	136,181
Argentina.....	121,419	254,882	337,548
Brazil.....	64,675	68,042	89,909
Chile.....	144,760	226,254	231,903
Other South America.....	162,319	193,214	176,941
China.....	31,730	45,810	80,066
Japan.....	214,140	258,348	614,516
Philippines.....	94,646	143,771	130,184

It will thus be seen that the British Empire is America's largest purchaser of paper, taking over 60 per cent of the exports last year. Trade is also rapidly growing with Argentina, China and Japan, Cuba and Central America, Canada and Germany.

BRITISH BUY MORE THAN THEY SELL.

Great Britain purchased \$13,818,618 worth of paper goods during the first six months of 1906, as compared with \$11,853,067 the same period of 1904. These are official British figures, which also gives the total exportations of British paper products at \$4,633,969 for the first half of 1904 and \$4,804,856 for the first half of 1906. The weights of these shipments were 31,457 and 33,284 long tons, respectively. Thus it will be seen that Great Britain is enjoying an export trade in paper of over 66,000 tons per annum, which is considerably in excess of the 49,000 tons figured out by the journal quoted.

CALABASH PIPES.**A PRACTICAL SMOKERS' NOVELTY FROM AFRICA.**

H. L. Washington, consul-general at large, reports from Cape Town that pipes made from the calabash have come into general use in South Africa, and suggests the growth of the calabash and manufacture of pipes in America. He writes:

Smokers who have used the calabash pipe agree that it gives a special softness of flavor that pipes of no other material offer. I believe this to be so, and that the demand for such a pipe in the American market would be very large. The calabash should be grown in the United States, and to this end seed is promised this office, which, when supplied, will be transmitted for the Department of Agriculture. I am forwarding a specimen of a calabash pipe in a half-completed stage and a finished pipe [all of which can be seen at the Bureau of Manufactures]. The calabash pipe industry is proving a very remunerative one here in Cape Colony, both to the growers of the calabash and those engaged in making it into pipes, and also to the retail sellers. It grows in certain sections of Cape Colony with little difficulty, but seems to demand a very hot and dry climate, with rain at the right season of the year, in order to reach perfection. The curved stem end of the vegetable forms a light and appropriate shape for pipes. It colors like meerschaum and will take a high polish. The life of one of these pipes is about that of a French briar-wood pipe. The usual lining is plaster of Paris, called by the trade meerschaum. A cheap grade is lined with tin. These pipes sell from 97 cents to \$62, according to type of finish. Pipe mounting and fitting being cheaper in England than here, large shipments are made to England for mounting and returned here for sale.

The industry is being crippled here by the growers refusing to sell the seeds of the calabash. It is extremely difficult to obtain them from any source. The crop last year was estimated at 60,000, and this year at about 150,000, but next season's prospects are not so good. An American business man here tells me that he has recently purchased some 20,000 calabash gourds from Cape Colony farmers for exportation—presumably in incompleting pipe formation—to the United States.

The following names are suggested to those interested in this matter: Hochschild & Co., 66 Long street; W. MacRobertson & Co., Plein street; Millar Brothers, Adderley street.

The above are retail and wholesale pipe dealers in Cape Town, but it might prove more advantageous to purchasers of the calabash who intend to export and manufacture in America, or who were seeking the half-finished pipe (the most usual form in which it is exported) to communicate with some commission house or agent. The following Cape Town parties are suggested:

H. W. Peabody & Co., Burg street (offices in New York).

Arkell & Douglas, Mutual Buildings, St. Georges street (offices in New York).

A. H. Mason, 32 St. Georges street.

INTERESTING FACTS ABOUT MATCHES.

A British newspaper estimates that the United Kingdom consumes 500,000,000 matches a day, or about 12 for every man, woman, and child. Smokers probably account for the greater number. About 90 tons of wood are used up in the form of matches every day, or about 35,000 tons a year. Sweden and Norway export over 25,000 tons of wood in matches every year. In France, where the tax on matches averages 8 cents per inhabitant, the consumption is comparatively small.

PARCELS POST WITH DENMARK.

The Secretary of the Treasury recently issued a notice to collectors and other officers of the customs that a parcels-post treaty concluded with Denmark took effect on October 1. The customary provisions regarding prohibited importations subjecting the packages to customs dues and customs regulations are contained in the convention and embraced in part of the Secretary's instructions.

The agreement provides in part that there shall be admitted to the mails exchanged thereunder articles of merchandise and mail matter, except letters, post cards, and written matter of all kinds that are admitted under any conditions to the domestic mails of the country of origin, except that no parcel must exceed \$50 or its equivalent in value, 4 pounds 6 ounces in weight, nor the following dimensions, viz, greatest length in any direction 3 feet 6 inches, greatest length and girth combined 6 feet, and must be so wrapped or inclosed as to permit the contents to be easily examined by customs officers and by postmasters duly authorized to do so.

AMERICAN GRAPHITE.

A very considerable increase in the production of graphite in 1905 is recorded by the United States Geological Survey.

The production of crystalline graphite in New York and Pennsylvania was 6,036,567 pounds, with a value of \$237,572. The graphite produced in Georgia, Wisconsin, Michigan, Alabama, North Carolina, Rhode Island, Colorado, and Nevada is classed as amorphous, and totaled 21,953 tons, valued at \$80,639. The importation of graphite in 1905 amounted to 17,456 tons, valued as \$983,034, an increase of almost 10 per cent over the previous year.

The production of artificial graphite has steadily increased since its introduction on the market in 1897. The quantity manufactured in 1905 in the United States amounted to 4,591,550 pounds, valued at \$313,980. The average price per pound was 6.38 cents, whereas the natural product was not quite 4 cents.

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VALUES OF FOREIGN COINS AND CURRENCIES.

[As given by the Director of U. S. Mint and published by Secretary of the Treasury Oct. 1, 1906.]

COUNTRIES WITH FIXED CURRENCIES.

Countries.	Monetary unit.	Value in U.S. gold.	Coins.
Argentina	Peso	\$0.96, 5	Gold—argentine (\$4.82, 4) and $\frac{1}{2}$ argentine; silver—peso and divisions.
Austria-Hungary	Crown .....	.20, 3	Gold—20 crowns (\$4.05, 2) and 10 crowns; silver—1 and 5 crowns.
Belgium	Franc .....	.19, 3	Gold—10 and 20 francs; silver—5 francs.
Brazil	Milreis .....	.54, 6	Gold—5, 10, and 20 milreis; silver— $\frac{1}{2}$, 1, and 2 milreis.
British N. A. (except Newfoundland).	Dollar	1.00	
British Honduras.....	do	1.00	
Chile.....	Peso .....	.36, 5	Gold—escudo (\$1.825), doubloon (\$3.65), and condor (\$7.30); silver—peso and divisions.
Colombia	Dollar	1.00	Gold—condor (\$9.647) and double condor; silver—peso.
Costa Rica	Colon .....	.46, 5	Gold—2, 5, 10, and 20 colons (\$9.30, 7); silver—5, 10, 25, and 50 centimos.
Denmark	Crown .....	.26, 8	Gold—10 and 20 crowns.
Ecuador	Sucre .....	.48, 7	Gold—10 sucres (\$4.8665); silver—sucre and divisions.
Egypt.....	Pound (100 piasters).	4.94, 3	Gold—5, 10, 20, and 50 piasters; silver—1, 2, 5, 10, and 20 piasters.
Finland.....	Mark .....	.19, 3	Gold—10 and 20 marks (\$1.93 and \$3.85, 9).
France.....	Franc .....	.19, 3	Gold—5, 10, 20, 50, and 100 francs; silver—5 francs.
Germany	Mark .....	.23, 8	Gold—5, 10, and 20 marks.
Great Britain	Pound sterling ..	4.86, 6 $\frac{1}{2}$	Gold—sovereign (£) and half sovereign.
Greece	Drachma .....	.19, 3	Gold—5, 10, 20, 50, and 100 drachmas; silver—5 drachmas.
Haiti.....	Gourde .....	.96, 5	1, 2, 5, and 10 gourdes; silver—gourdes and divisions.
India	Pound sterling ^a .	4.86, 6 $\frac{1}{2}$	Gold—sovereign (£); silver—rupee and divisions.
Italy	Lira .....	.19, 3	Gold—5, 10, 20, 50, and 100 lire; silver—5 lire.
Japan	Yen .....	.49, 8	Gold—5, 10, and 20 yen; silver—10, 20, and 50 sen.
Liberia	Dollar	1.00	
Mexico	Peso ^b49, 8	Gold—5 and 10 pesos; silver—dollar ^c or peso and divisions.
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Newfoundland	Dollar	1.01, 4	Gold—\$2 (\$2.02, 7).
Norway	Crown26, 8	Gold—10 and 20 crowns.
Panama.....	Balboa	1.00	Gold—1, 2 $\frac{1}{2}$, 5, 10, and 20 balboas; silver—peso and divisions.
Peru	Libra	4.86, 6 $\frac{1}{2}$	Gold— $\frac{1}{2}$ and 1 libra; silver—sol and divisions.
Philippine Islands...	Peso .....	.50	Silver—peso, 50, 20, and 10 centavos.
Portugal	Milreis	1.08	Gold—1, 2, 5, and 10 milreis.
Russia	Ruble .....	.51, 5	Gold—5, 7 $\frac{1}{2}$, 10, and 15 rubles; silver—5, 10, 15, 20, 25, 50, and 100 copeks.
Spain	Peseta .....	.19, 3	Gold—25 pesetas; silver—5 pesetas.
Sweden	Crown .....	.26, 8	Gold—10 and 20 crowns.
Switzerland.....	Franc .....	.19, 3	Gold—5, 10, 20, 50, and 100 francs; silver—5 francs.
Turkey	Plaster .....	.04, 4	Gold—25, 50, 100, 250, and 500 plasters.
Uruguay.....	Peso	1.03, 4	Gold—peso; silver—peso and divisions.
Venezuela	Bolivar .....	.19, 3	Gold—5, 10, 20, 50, and 100 bolivars; silver—5 bolivars.

COUNTRIES WITH FLUCTUATING CURRENCIES. ^d

Country and monetary unit.	Jan. 1, 1906.	Apr. 1, 1906.	July 1, 1906.	Oct. 1, 1906.	Country and monetary unit.	Jan. 1, 1906.	Apr. 1, 1906.	July 1, 1906.	Oct. 1, 1906.
Bolivia:	Cts.	Cts.	Cts.	Cts.	China—Continued.	Cts.	Cts.	Cts.	Cts.
Silver boliviano	46.5	47.8	48.0	48.5	Mexican dollar	75.5	77.5	77.9	78.6
Central America:					Nankin tael.....	73.8	75.3	73.9	76.4
Silver peso	46.5	46.5	48.0	48.5	Ningpo tael.....	71.5	73.4	75.7	74.5
China:					Newchwang tael....	74.3	76.3	76.8	77.5
Amoy tael.....	76.3	78.3	78.8	73.0	Peking tael	69.6	71.5	71.9	72.6
British dollar.....				52.3	Shanghai tael	70.4	72.3	72.7	73.4
Canton tael.....	76.0	78.1	78.5	79.2	Swatow tael	76.7	78.8	79.2	79.9
Chefoo tael.....	72.9	74.9	75.3	76.0	Takau tael.....	73.9	75.9	76.3	77.0
Chinkiang tael.....	74.5	76.5	76.9	77.6	Persia:				
Fuchau tael.....	70.5	72.4	72.8	73.5	Silver kran	8.6	8.8	8.8	8.9
Halkwan (customs) tael.....	77.6	79.7	80.1	80.8	Straits Settlements:				
Hankow tael.....	71.8	73.3	73.7	74.3	Silver dollar				52.3
Hongkong dollar....	50.2	51.5	51.8	52.3					
Kiaochou	75.3	77.3	77.7	77.0					

^aThe rupee, \$0.3244 $\frac{1}{2}$, 15 to the sovereign, constitutes the money of account.^bSeventy-five centigrams fine gold.^cValue in Mexico, \$0.498.^dCoins of silver-standard countries are valued by pure silver content at average market price of silver for the three months preceding date of circular issued by U. S. Treasury Dept.

VALUES OF FOREIGN COINS AND CURRENCIES.

[As given by the Director of U. S. Mint and published by Secretary of the Treasury Oct. 1, 1906.]

COUNTRIES WITH FIXED CURRENCIES.

Countries.	Monetary unit.	Value in U.S. gold.	Coins.
Argentina	Peso	\$0.96, 5	Gold—argentine (\$4.82, 4) and $\frac{1}{2}$ argentine; silver—peso and divisions.
Austria-Hungary	Crown .....	.20, 3	Gold—20 crowns (\$4.05, 2) and 10 crowns; silver—1 and 5 crowns.
Belgium	Franc .....	.19, 3	Gold—10 and 20 francs; silver—5 francs.
Brazil	Milreis .....	.54, 6	Gold—5, 10, and 20 milreis; silver— $\frac{1}{2}$, 1, and 2 milreis.
British N. A. (except Newfoundland).	Dollar	1.00	
British Honduras.....	do	1.00	
Chile.....	Peso .....	.36, 5	Gold—escudo (\$1.825), doubloon (\$3.65), and condor (\$7.30); silver—peso and divisions.
Colombia	Dollar	1.00	Gold—condor (\$9.647) and double condor; silver—peso.
Costa Rica	Colon.....	.46, 5	Gold—2, 5, 10, and 20 colons (\$9.30, 7); silver—5, 10, 25, and 50 centimos.
Denmark	Crown.....	.26, 8	Gold—10 and 20 crowns.
Ecuador	Sucre.....	.48, 7	Gold—10 sucres (\$4.8665); silver—sucre and divisions.
Egypt.....	Pound (100 piasters).	4.94, 3	Gold—5, 10, 20, and 50 piasters; silver—1, 2, 5, 10, and 20 piasters.
Finland.....	Mark .....	.19, 3	Gold—10 and 20 marks (\$1.93 and \$3.85, 9).
France.....	Franc .....	.19, 3	Gold—5, 10, 20, 50, and 100 francs; silver—5 francs.
Germany	Mark .....	.23, 8	Gold—5, 10, and 20 marks.
Great Britain	Pound sterling ..	4.86, 6 $\frac{1}{2}$	Gold—sovereign (£) and half sovereign.
Greece	Drachma.....	.19, 3	Gold—5, 10, 20, 50, and 100 drachmas; silver—5 drachmas.
Haiti.....	Gourde.....	.96, 5	1, 2, 5, and 10 gourdes; silver—gourdes and divisions.
India	Pound sterling ^a ..	4.86, 6 $\frac{1}{2}$	Gold—sovereign (£); silver—rupee and divisions.
Italy.....	Lira .....	.19, 3	Gold—5, 10, 20, 50, and 100 lire; silver—5 lire.
Japan.....	Yen .....	.49, 8	Gold—5, 10, and 20 yen; silver—10, 20, and 50 sen.
Liberia	Dollar	1.00	
Mexico	Peso ^b .....	.49, 8	Gold—5 and 10 pesos; silver—dollar ^c or peso and divisions.
Netherlands.....	Florin .....	.40, 2	Gold—10 florins; silver— $\frac{1}{2}$, 1, and 2 $\frac{1}{2}$ florins.
Newfoundland	Dollar	1.01, 4	Gold—\$2 (\$2.02, 7).
Norway.....	Crown.....	.26, 8	Gold—10 and 20 crowns.
Panama.....	Balboa.....	1.00	Gold—1, 2 $\frac{1}{2}$, 5, 10, and 20 balboas; silver—peso and divisions.
Peru	Libra	4.86, 6 $\frac{1}{2}$	Gold— $\frac{1}{2}$ and 1 libra; silver—sol and divisions.
Philippine Islands....	Peso .....	.50	Silver—peso, 50, 20, and 10 centavos.
Portugal.....	Milreis	1.08	Gold—1, 2, 5, and 10 milreis.
Russia	Ruble .....	.51, 5	Gold—5, 7 $\frac{1}{2}$, 10, and 15 rubles; silver—5, 10, 15, 20, 25, 50, and 100 copeks.
Spain	Peseta.....	.19, 3	Gold—25 pesetas; silver—5 pesetas.
Sweden	Crown.....	.26, 8	Gold—10 and 20 crowns.
Switzerland.....	Franc .....	.19, 3	Gold—5, 10, 20, 50, and 100 francs; silver—5 francs.
Turkey	Piaster.....	.04, 4	Gold—25, 50, 100, 250, and 500 piasters.
Uruguay.....	Peso	1.03, 4	Gold—peso; silver—peso and divisions.
Venezuela	Bolivar.....	.19, 3	Gold—5, 10, 20, 50, and 100 bolivars; silver—5 bolivars.

COUNTRIES WITH FLUCTUATING CURRENCIES. ^d

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Silver boliviano.....	46.5	47.8	48.0	48.5	Mexican dollar	75.5	77.5	77.9	78.6
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British dollar.....				52.3	Shanghai tael	70.4	72.3	72.7	73.4
Canton tael.....	76.0	78.1	78.5	79.2	Swatow tael	76.7	78.8	79.2	79.9
Chefoo tael.....	72.9	74.9	75.3	76.0	Tientsin tael.....	73.9	75.9	76.3	77.0
Chinkiang tael.....	74.5	76.5	76.9	77.6	Persia:				
Fuchau tael	70.5	72.4	72.8	73.5	Silver kran	8.6	8.8	8.8	8.9
Haikwan (customs) tael.....	77.6	79.7	80.1	80.8	Straits Settlements:				
Hankow tael.....	71.3	73.3	73.7	74.3	Silver dollar				52.3
Hongkong dollar....	50.2	51.5	51.8	52.3					
Kiaochou	75.3	77.3	77.7	77.0					

^aThe rupee, \$0.3244 $\frac{1}{2}$, 15 to the sovereign, constitutes the money of account.^bSeventy-five centigrams fine gold.^cValue in Mexico, \$0.498.^dCoins of silver-standard countries are valued by pure silver content at average market price of silver for the three months preceding date of circular issued by U. S. Treasury Dept.

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AFRICA.

THE SUEZ CANAL.

BRITISH MERCHANT MARINE PREDOMINATES.

VOLUME OF TRADE INDICATES GROWTH OF ORIENT—PARALLEL ROUTE
NOT LIKELY—RELATIONS TO COMMERCE OF THE PACIFIC OCEAN.

During his visit to Egypt, Special Agent Charles M. Pepper inquired into the operations of the Suez Canal, and furnishes the annexed report, in which facts and figures regarding the operations of the great waterway are supplemented by observations and deductions on the relation which Suez will bear to the future in international trade and especially with the trade of the Far East. Mr. Pepper writes:

Traffic through the Suez Canal offers a means of measuring the world's maritime commerce between the West and the East. If not the sole criterion it is a chief one, since the overwhelming bulk of the trade with the Orient flows through this channel. Its growth signifies that international markets are growing. While the construction of a canal cut through sand banks and not requiring locks may present little in the way of suggestions for the United States in overcoming the engineering difficulties of the Panama waterway, the administration and operation of Suez afford instructive precedents. But the broader field of information is found in the analysis of the traffic, the means the canal company adopts to keep pace with it by providing facilities of transit to meet the rapid and steady advances in shipbuilding, the reduction of freight charges, and the other inducements to draw commerce to the Suez route. In their widest sphere all those factors have an influence on the ultimate mastery of the Pacific. By some authorities it is assumed that the Indian Ocean and the western Pacific are to be the field of battle for supremacy among the mercantile marines of the world, and that in the struggle for the commercial conquest of the seas the Suez Canal will be the controlling force. This view may be accepted as to the Indian Ocean, but its correctness in relation to the Pacific may be questioned. That subject, however, is not of present day importance.

INCREASE IN CARRYING CAPACITY OF VESSELS.

The striking fact in relation to Suez is not so much the growth in the volume of the traffic, though that has been enormous, as the increase in the net tonnage of the vessels passing through the canal. For the year 1905 the increase in the mean tonnage, which was stationary the previous year, was from 3,163 to 3,191 tons. In 1885 the mean tonnage per vessel was 1,747 tons, so that in twenty years the increase was approximately 80 per cent. This is declared to be in line with the principles of modern shipbuilding, which look to the progression in the mean gauge of vessels as one of the essentials of progress in maritime construction. The increase in capacity has been greater than in the number of vessels constructed, the universal tendency also being to augment the interior capacity proportionately more than the ship's dimensions and speed, though the latter features are notable. The saving, it is explained, results from the fact that the cost diminishes in inverse ratio to the vessel's dimensions, and consequently in the class of vessels traversing the canal the cost increases as the square of the linear dimensions, while the benefits are in proportion to capacity or on the cube of the same dimensions—that is, by doubling the dimensions of a vessel the net tonnage becomes eight times greater.

The fact that the early difficulties with compound engines were overcome almost simultaneously with the opening of Suez, and reduced space for the machinery was secured, while high and low pressure engines enabled the steam pressure to be raised so as to double and quadruple the motive power obtainable from a ton of coal, must also be recognized in analyzing the increase in net tonnage and the growth in the volume of traffic through the canal. The facilities for increasing the number of vessels passing were materially enlarged in 1887, when, by means of electric lights, night navigation was allowed, and since then has continued without interruption.

RECORD OF VESSEL MOVEMENT.

The general movement since the opening of the canal may be taken in five-year periods, which make the following exhibit:

Year.	Number of transits.	Gross tonnage.	Net tonnage.	Tonnage of vessels.	
				Average gross.	Average net.
1870.....	486	485,911	(a)	897	.....
1875.....	1,494	2,940,708	2,009,984	1,968	1,345
1880.....	2,026	4,844,520	3,057,422	2,144	1,509
1885.....	3,624	8,985,412	6,335,758	2,478	1,747
1890.....	3,389	9,749,129	6,890,094	2,877	2,033
1895.....	3,434	11,833,637	8,448,383	3,446	2,460
1900.....	3,441	13,699,238	9,738,152	3,981	2,880
1905.....	4,115	18,308,498	13,132,694	4,449	3,191

^a Net tonnage was not calculated till 1873; in 1870 it was estimated at 800,000 tons.

War ships and military transports are included in the table. In 1905 the total number of military transports and war ships was 146, with a net tonnage of 369,344 tons. Merchant ships in ballast numbered 167, with a net tonnage of 391,595, as against 2,950 loaded ships of 9,397,969 tons, and 823 mail packets with 2,930,473 tons. The balance of the transits was made up of various minor craft. The number of passengers was 252,693, of whom 142,514 were civilians. Since

the toll is 10 francs, or \$1.90, per person, this source of income is not inconsiderable. In 1870 the number of passengers of all classes was 26,758, and in 1880, 101,551. In 1890, when the practice of classifying the civilians separately was adopted, they numbered 93,506, out of a total of 161,353. In 1900 the civilian passengers were 128,262 in number.

GOOD RESULTS FROM IMPROVEMENTS.

The measures taken by the canal company for keeping up with the advances in shipbuilding, while not always equal to the demands of the vessel owners, appear to have been fairly adequate, especially since the energetic agitation began by the British shipowners and exporters in 1883, which took on an international character and resulted in the formation of a consultative commission of engineers and shipowners. This association sent a subcommittee to inspect the canal works and report on the improvements which were thought to be necessary. This subcommittee made numerous recommendations for widening the surface of the straight reaches and curves and for deepening the channel to 9 meters.

The canal at the outset had 8 meters (26 feet) depth and 22 meters (73 feet) surface width. It is interesting to recall that the subcommittee was credited with the belief that the proposed deepening of the channel and the other improvements recommended would prove sufficient for all future needs. Yet the improvements under way at the present time have deepened the channel to 10.5 meters, and since the beginning of 1906 vessels with a draft of 27 feet (8.23 meters) have been admitted to navigation, an increase of 9 inches draft over the previous year. This is the outcome of progressive works begun in 1886 for deepening the channel to 8.5 meters. This work was completed in April, 1890, and ships of 7.8 meters draft were admitted to transit. At the same time the widening of the surface by 15 meters, or approximately 50 feet, was commenced and this operation was completed in December, 1898. The two improvements involved the excavation of 22,000,000 cubic meters of earth, mud, and sand, of which one-fifth was done by hand labor. From 1895 the deepening operations continued and in January, 1902, vessels with a draft of 8 meters, or 26½ feet, were admitted to transit.

During this period the curves were rounded off so as to give increased facilities for the passing of vessels and thereby shorten the time in transit, additional signal stations were established and crossing places fixed at every 5 kilometers, or about 3 miles, with an extra width of 15 meters. During 1905 the excavations in the canal proper in deepening the channel to 10.5 meters amounted to 1,354,588 cubic meters, while the regular works involved the extraction of 1,208,068 cubic meters by hand labor and 918,754 cubic meters by dredges, the latter including 34,800 cubic meters of rock excavation.

IMPROVEMENTS IN PROGRESS.

The improvements now in progress include the definite enlargement by 15 meters from kilometers 61 to Suez, a distance of 50 miles; the extension of the Asiatic curve from Lake Timsah station from 1,200 to 2,000 meters; the broadening of the station from 500 to 800 meters, and the enlargement of the canal surface to 100 meters surface width at the debouches in Great Bitter Lake. The latter works will require the excavation of 6,450,000 cubic meters of earth and will require five years.

While the prevailing winds and the mud nature of the soil at the Red Sea entrance to the canal necessitate continuous dredging to keep the Suez or Port Tewfik channel open, the most extensive permanent improvements are at Port Said, the Mediterranean entrance, where it was necessary to create a harbor. Very extensive improvements are now in progress, and it is the intention to double the size of the harbor. The new basins on the Asiatic or eastern side, which are intended for colliers and petroleum ships, are being dredged. When this work is completed the Abbas basin on the western side, which is now used by the colliers, will be utilized by the general shipping. What is known as the Cherif basin on the western side is being doubled in size and deepened 30 feet, while the plans have been entered upon for the construction of wharves and warehouses. When the Cherif basin enlargement is finished the canal company's workshops will be removed to the Asiatic banks and the land now occupied by them will be dredged away and deepened. The restoration and prolongation of the eastern jetty are now going forward. All these improvements are expected to be completed within the next five years.

The value of the canal company's floating material in 1905 was placed at \$5,500,000, including 21 dredges, 27 barges, 8 floating cisterns, and 30 steam launches. At the same time orders had been placed for an additional \$1,000,000 worth of machinery and some of these have since been filled. The new floating dock at Port Said was put in service in 1904. The dredging and maintenance works for the canal are carried on by the company, but the Port Said Harbor and other improvements are let by contract.

A SECOND CANAL NOT CONTEMPLATED.

To enable all the improvements planned for the next five years to be carried on, the shareholders of the company at the annual meeting held in Paris in June, voted to increase the loan of 25,000,000 francs, which was authorized in 1901, to 50,000,000 francs. This places approximately \$10,000,000 at the disposal of the management in addition to the ordinary revenues which are set aside for maintenance and improvement.

At this meeting Prince D'Arenberg, president of the company, said that the canal should be enlarged and deepened, so as to render collisions and foundering more and more rare, and that the company already had added materially to its wrecking outfit. This was in answer to the suggestion of a second canal, which was made in view of the accident to the *Chatham*, a vessel loaded with dynamite and gunpowder, which during its passage through the canal in September, 1905, caught fire and was abandoned by its crew. The fire was put out by the employees of the company and the ship blown up with much less damage than was anticipated and with great credit to the skill and daring of the employees. The channel was blocked for thirteen days. The suggestion of a second canal in order to avoid such accidents was met with the statement that if one channel could be blocked by an accident the same thing could happen to two channels. From this statement of the president it was made clear that the Suez Canal Company has no intention of digging another canal, and there is no basis of a concession for a rival one. The question of the future, therefore, relates to the ability of the company to keep abreast with the rapid advances in shipbuilding.

CONFLICTING VIEWS AS TO DEPTH AND WIDTH.

Speaking on this subject at the Paris meeting, Prince D'Arenberg referred to the achievement of towing the huge dry dock Dewey through the channel for the United States Government as an illustration of the way in which the canal meets the demands upon it. He also referred to the constant agitation of the shipowners for greater facilities, saying that they were not agreed among themselves, some insisting that the canal was deep enough now and should be widened, while others declared that there was no need of greater width, since what was needed was more depth.

While these conflicting views may be attributed to individuals, yet the shipowners of the world as a body appear to be pretty well united in pressing both for more depth and greater width. The president of the canal company in his report to the stockholders recognized this when he said that the number and size of vessels grows without ceasing. He declared that the policy of the company is to render the passage from the Mediterranean to the Red Sea "more and more easy, more and more rapid, and less and less costly." Yet shipbuilding improvements are so phenomenal that they are hard to keep up with. If the company were to announce that at a given date the channel would be available for vessels of 29 feet draft instead of 27 as at present, on that day an ample fleet with the maximum draft would be waiting entrance.

TIME OF TRANSIT AND QUARANTINE.

The saving of time in transit through the canal is one point which the shipowners are likely to secure. Under the regulations of the company the speed of vessels is limited to $5\frac{1}{2}$ miles per hour, so that for the 88 miles seventeen hours would be required, without allowing for time lost in tying up for the passing of other ships. But a greater speed can be made in traversing Lake Timsah and the Bitter Lakes, and some of the large mail ships in ordinary circumstances count on sixteen hours as the limit, since they are given preference in crossing and do not have to tie up so frequently. The transit and the tying up for crossing are regulated by the central signal station at Ismailia, the chief signal station midway in the canal. Yet sometimes the mail steamers are eighteen hours getting through, while the freight boats are nineteen and twenty hours. These delays are the most frequent causes of complaint and the company is seeking to obviate them by providing greater facilities for crossing.

The system of quarantine now in force on the canal has a deep interest for the countries which still follow the barbarous practice of placing an infected or suspected vessel with crew and passengers in detention. Under the international agreement, to which most of the European nations are parties, they are represented in the quarantine boards stationed at the entrance to the canal, and physicians of various nationalities are included among the health officers. The terms of the Venice convention are observed. As an illustration of the working of the system, a vessel coming through the Red Sea is boarded at Suez by a health officer, and if the papers are regular and no cases of infectious disease exist the vessel proceeds in the regular way. But should there be infection on board the infected cases are removed to the quarantine station at Moses Wells, passengers for Egypt are disembarked at the detention station and remain there the required period

for observation, disinfecting apparatus and materials are sent aboard the vessel by means of pontoons, the health officer takes charge, disinfects and fumigates, and the ship proceeds through the canal, whether by night or day, without the loss of an hour. At Port Said the vessel coals in quarantine and proceeds to her port of destination, subject of course to the quarantine regulations there. The shipowners bear all the costs of the canal sanitation, and in case of a wrong diagnosis or of other mistakes they have no means of recovering the expenses incurred. But while in individual instances this is a hardship, the loss is infinitesimal in comparison with the saving to the vast volume of international commerce that traverses the canal without loss from detention.

RATES FOR TRANSIT AND RECEIPTS.

Of equal importance with increased transit facilities, and by many shipowners considered of greater consequence, is the question of the canal tolls or rates. The total receipts of the Canal Company in 1905 were 117,308,000 francs, or about \$22,250,000. The total expenses were 40,984,000 francs, leaving a balance of 76,324,000 francs, or approximately \$14,675,000 for dividends and other purposes. At the prevailing price of the Suez Canal shares the dividend rate about equals 3 per cent, and shareholders have been clamoring for an increase, while the shipowners, in view of the enormous increase in the value of the original investment, are ceaselessly calling for a reduction in tolls, especially since the growth of traffic is so steady, and since in the case of a canal increased traffic does not augment working expenses very greatly.

The agitation for a reduction of tolls has been persistent almost from the opening of the canal. The original rates were 10 francs per ton, with a reduction of one-fourth for ships in ballast; but when the company was facing bankruptcy in 1874 these were raised, by means of surtaxes, to 13 francs. On the protest of the British and other shipowners, backed by their respective Governments, the surtaxes were gradually reduced until they were entirely abolished in 1884, when the rate was left at 10 francs per ton. In the same year the pilotage tax was abolished, and the pilots, of whom more than 100 are now employed, have since then been paid by the company. In 1885 the transit dues were reduced to 9½ francs per ton; in 1893 to 9 francs; in 1902 to 8½ francs, and at the beginning of 1906 the new rate of 7¾ francs went into effect, so that the present charge is about \$1.48 per ton. The aim of the shipowners is to bring the rate down to 5 francs, or less than \$1, by 1912, but the canal company does not hold out the promise that this will be done.

GROSS AND NET TONNAGE.

The reduction from 13 francs in 1874 to 7¾ francs in 1906 is to be understood in connection with the imposition of the toll in the earlier years on the gross register of the vessel. This resulted in the convening of an international commission by the Sultan of Turkey at Constantinople in October, 1873, when the British method of arriving at gross and net tonnage was approved, and what was known as the Danube rule was adopted. Under this decision the toll was levied on the net registered tonnage, but its application by the company has not always been accepted as the correct interpretation of either the Danube rule or the English method. The most recent controversy

was over the company's treatment of spaces in shelter decks and deck superstructures of vessels. It required that if at any time a vessel carried cargo or stores in a space for which exemption had been claimed, the tonnage of this space should be added to the certificate and thereafter should not be exempt from measurement. However, some modifications were made in this regulation.

ENGLISH INFLUENCE IN MANAGEMENT.

The largest proportion of the Suez Canal traffic is under the English flag, and the British shipowners usually have been the most active in the agitation for decreased rates and increased transit facilities. Since the purchase of seven-sixteenths of the shares of the company by the British Government through Lord Beaconsfield in 1875, the English influence on the canal board has been a potential one. The Government, however, has not encouraged the shipowners who have claimed that the large dividends received from its shares might be distributed among them as a rebate bounty. Nor does it always fall in line with their views when antagonistic to the canal company. Observation of the operation of the canal on the ground gives one a high opinion of French administrative capacity and executive efficiency. But notwithstanding the international character of the canal, its neutrality, and the interests of the various Governments in everything relating to it, it is owned and operated by a private French company, whose officers largely determine the question of improved transit facilities, tolls, and general policy.

CURRENTS OF INTERNATIONAL TRADE.

The currents of international trade as they have flowed through the canal from year to year with a rising tide are of absorbing interest from the indications they give of the regions in which markets have grown and in which future growth may be expected. The general movement of import and export transit for the regions beyond Suez during the last fifteen years is exhibited in the following table in terms of thousands of tons:

Year.	East coast of Africa and islands.	Bombay and west coast of India.	Calcutta and east coast of India.	Sonde, Siam, Philippines, East Indies, Dutch possessions.	China, Cochin China, Japan.	Australia.	Other regions.	Total.
1890	149	1,988	1,882	879	928	716	348	6,890
1891	219	2,610	2,297	1,113	1,167	799	494	8,699
1892	232	2,083	2,152	966	1,105	795	879	7,712
1893	172	2,239	1,833	1,028	1,234	798	355	7,659
1894	193	2,106	2,242	970	1,347	798	383	8,039
1895	357	2,015	2,417	1,003	1,400	840	416	8,448
1896	269	1,649	2,411	1,085	1,578	871	697	8,560
1897	303	1,269	2,419	1,033	1,705	845	825	7,899
1898	341	2,034	2,652	1,048	1,851	820	492	9,238
1899	378	1,846	2,892	1,265	2,175	922	418	9,896
1900	404	1,128	2,763	1,372	2,756	864	451	9,738
1901	382	1,675	3,106	1,504	2,710	972	475	10,824
1902	397	1,962	3,478	1,539	2,486	981	405	11,248
1903	477	2,405	3,481	1,435	2,665	926	518	11,907
1904	450	3,033	4,006	1,722	2,665	924	602	13,402
1905	482	2,623	3,722	1,671	2,943	995	698	13,134

While in isolated years the traffic for several of the sections advances and falls back, the gain through the series of years is evident. Thus

in both the west and the east coast of India, though the tonnage for 1905 was notably below that of the previous years, it showed an increase from 3,870,000 tons in 1890 to 6,345,000 in 1905. India in fact has been a large gainer by the canal, as also have been China and Japan. It will be noted that the latter regions since 1900 have shown little average gain. Australia, too, has no phenomenal increase to record. In view of this, while the influence of the Suez Canal on the Indian Ocean may be considered to be supreme and while its aid in the development of eastern Africa is already recognized by the steamship companies increasing their African service, it is far from being demonstrated that Suez will be the dominating force in the commercial control of the Pacific that is to be fought out in the future. The announcement that the British mail for Hongkong has shortened the time a week by abandoning the Suez route for the Canadian overland is already causing speculation, though the cargoes can not be expedited in the same manner as the mails. Whether the Tehuantepec route, which the Mexican Government has opened, will succeed in drawing traffic from the Orient can not be determined until more time has been given to the experiment. The prospective influence of the Panama Canal has been discussed so often as not to need repetition; but while the growth of the Suez traffic in the future may be considered as certain, as in the past, the Far East proportion may have definite limits.

RAILWAY AS A COMPETITOR.

A parallel or rival canal is not practicable, and the only competition that may be looked for in the future will come when the enterprise known as the Bagdad Railway, which is to form a through line from Constantinople to the Persian Gulf, is carried out. This project has been undertaken by German capitalists under concessions from the Turkish Government, but it is involved in the political jealousies and intrigues of the European powers and the necessary capital is not easily raised. The connection of Constantinople with the Persian Gulf is probably fifteen years distant, but when the political jealousies are harmonized and the railway line completed this route may be considered as a competitor with the Suez Canal for the commerce of India.

QUESTION OF FLAGS.

The interest of the United States in the canal transit has no relation to its own flag, since, with the exception of war ships, vessels flying the American colors do not average one a year. But a considerable quantity of the products of the United States is shipped in foreign bottoms direct, in addition to the transshipments from European ports. In 1905 the number of transits from New York was 83, Philadelphia 11, and other ports 2, the aggregate net tonnage being 289,384. The larger numbers of the vessels were petroleum ships. The transits through the canal to American ports were: Baltimore, 10; Boston, 20; Delaware Bay, 9; New York, 75; Philadelphia, 10; and other ports, 5; making a total of 129, with an aggregate tonnage of 449,504.

The question of the flags or the nationality of the ships excites constant discussion and arouses international jealousies. The Suez transits afford as accurate means as exist for measuring the relative growth of the merchant marine of the different nations. The Egyptian Government has published recently, with its official imprint, the statistical

returns of navigation through the canal, based on information furnished by the company. The share of the different countries in the Suez traffic for 1905 was as follows:

Transits and tonnage, 1905.

Flag.	Number of transits.	Net tonnage.	Flag.	Number of transits.	Net tonnage.
British	2,484	8,356,940	Danish	23	54,486
German	600	2,113,484	Greek	12	16,248
French	272	844,872	Swedish	8	16,563
Dutch	219	577,731	American	6	13,304
Austrian	139	458,402	Portuguese	5	3,040
Italian	91	189,565	Egyptian	2	1,502
Norwegian	66	116,328	Chinese	1	1,412
Russian	70	177,056	Argentine	1	1,147
Turkish	91	117,289			
Spanish	26	75,236	Total	4,116	13,184,106

The preponderance of British shipping appears from these figures, which show that it furnished two-thirds of the total tonnage, but some of the English shipowners find fault because the percentage is not so great as in previous years. A long series of tables giving the returns from 1882, the first year in which the net tonnage was classified by flags, establishes this relative decrease. Their reproduction in detail is not necessary to exhibit the salient features. The increase in the total net tonnage from 1882 to 1905 was 8,058,000 tons, or 159 per cent. All the leading maritime nations shared in this increase, the proportions being as follows: Great Britain, 103 per cent; France, 197; Italy, 75; Holland, 334; Austria, 420; Germany, 1,561.

It might be said that in 1882 Germany had practically no merchant marine, so that the enormous increase in percentage is not to be taken as a normal one. But since 1895 the progression has been regular, there being only one year in which a falling off in the tonnage from the previous year was shown. It also appears from the statistical returns that while Great Britain's commerce with the countries commonly called the Far East fell from 813,000 tons in 1882 to 636,000 in 1905, or 22 per cent, most of the other countries showed increases varying from 20 to 100 per cent. But Germany's increase was from 25,000 to 161,000 tons, or 544 per cent.

The most significant feature of the Suez Canal traffic at the present time is the evidence it affords of the growth of the German merchant marine and the expansion of German commerce.

NORTH AFRICA.

ALGERIA.

EXPORTS AND IMPORTS—LARGE INCREASES.

Consul J. Johnston, of Algiers, writes in relation to the trade of Algeria in 1905:

The imports into Algeria in 1905 show an increase of nearly \$3,000,000 over 1904, caused by a short crop of cereals, which necessitated the purchasing of grain abroad instead of having a surplus to export, as is usually the case. The exports from Algeria show a loss of nearly \$8,600,000 compared with 1904. This was due to the over-

production of wine and to the consequent slack demand in France. The total imports into Algeria in 1905 amounted to \$76,777,400, distributed among the following principal countries: France and colonies, \$66,969,200; Great Britain and colonies, \$1,449,400; Spain, \$1,284,800; Brazil, \$1,217,000; Morocco, \$1,177,600; Russia, \$1,025,600; United States, \$672,000; Italy, \$575,600; Turkey and Tripoli, \$577,800; Roumania, \$484,000; Germany, \$386,000; Holland, \$208,800; Sweden, \$184,000; and Belgium, \$159,200. The total exports from Algeria in 1905 amounted to \$45,752,600. The countries making the greatest purchases were: France and colonies, \$35,526,600; Great Britain and colonies, \$3,020,000; Belgium, \$2,095,600; Germany, \$1,653,200; Italy, \$1,072,400; Holland, \$752,200; Austria-Hungary, \$660,600; Russia, \$556,600; Spain, \$496,200; and the United States, \$324,200.

TRADE WITH THE UNITED STATES.

The total trade of Algeria with the United States in 1905 amounted to \$996,200. The imports were valued at \$672,000 and consisted of the following articles: Cotton-seed oil, \$279,000; leaf tobacco, \$110,000; agricultural implements, \$103,600; petroleum, \$61,400; machinery, \$19,200; hardware, \$15,000; grain, \$15,000; wood and staves, \$41,800; and other articles, \$27,000. The exports to the United States amounted to \$324,200 and consisted of raw skins, valued at \$109,400; corkwood, \$103,800; vegetable fiber, \$59,000; tartar, \$23,800; olive oil, \$11,800; essence of geranium, \$10,600; prepared skins, \$3,200; plants, \$1,000; and other articles, \$1,600. The increase in imports was \$80,000 over 1904, which does not include American goods arriving from France and England.

Forests are an important item in the property of the colony. The revenue in 1905 from sales of corkwood and other products was about \$870,000, an increase of \$100,000 over 1904. The total value of exports of corkwood in 1905 amounted to \$2,600,000. Algeria ranks third in cork production, Portugal and Spain occupying first and second place, respectively.

Remarkable progress has been made in pacifying the Sahara since the extension of the railway southward and the organization of the dromedary corps. The Algerian tribes are well protected against the marauders from Morocco and Figuig, and are doing a brisk trade with Beni-Cunif, the nearest station on the frontier. Since the suppression of the slave caravans a money crisis has arisen in the interior of the desert. The currency used by the tribes was a collection of coins from all countries cut to make small change. The Algerian Government has decided to receive this coin, which amounts to about \$40,000, at its nominal value for postage, taxes, and other public services.

MOROCCO.

TRADE STATISTICS UNCERTAIN—MORE AMERICAN GOODS WANTED.

Consul-General Hoffman Philip, of Tangier, furnishes the following report on the commerce and industrial conditions of Morocco:

The participation of the United States in Moroccan trade for 1905 can not be ascertained with any exactness, as there is no direct transportation between the two countries. The importations of American products are listed as coming from the country to which the vessel of

transport belongs, the ship's manifest being the only method of computing the amount in the absence of custom-house returns. Thus large quantities of merchandise are reckoned as British imports for the reason that they are carried from Gibraltar, 35 miles from Tangier, in British steamers, whereas the consignments may be actually from the United States or elsewhere. Also in the case of Moroccan exports, a large percentage are shipped without consular invoices to Marseille or other ports and there sorted and reshipped to the United States.

The entire volume of trade at the port of Tangier for 1905 amounted to \$4,284,748, of which \$2,814,389 were imports and \$1,470,359 were exports. The total value of declared exports from Morocco to the United States for the calendar year 1905 amounted to \$456,056, of which goatskins represented \$449,391.

Agencies of the Colonial Oil Company were established in various ports of Morocco during 1905 for the sale of American petroleum. Large opportunities undoubtedly exist for the sale of such American products as cotton and cloth goods, flour, sugar, cement, clocks, knives, watches, etc. A considerable amount of interest in the Moroccan market was evinced during the year by exporters and manufacturers in the United States, and with the proper effort American trade could be greatly augmented and more firmly established.

WEST AFRICA.

REPUBLIC OF LIBERIA.

RESOURCES POORLY DEVELOPED AND COMMERCE SMALL.

Consul-General Ernest Lyon writes that the natural resources of Liberia are many and varied. He says:

The products consist of cocoa, ginger, piassava, cola, coffee, and such valuable woods as ebony, cedar, mahogany, walnut, oak, and corkwood. Some of these are almost indestructible, and resist the attacks of the African bugabugs, a species of insect which raids buildings, and in a short time renders the woodwork useless. Of the minerals, iron ore, mica, crystal quartz, and granite are distributed in abundance throughout the Republic. Indigeneous fruits and vegetables are plentiful, such as pineapples, cocoanuts, pawpaws, oranges, plums, guava, and ground nuts. The pineapple grows without cultivation to a large size, and is sweet and delicious. Some cultivate the pineapple for private use, and the improvement is very marked. The only reason why this fruit has not been exported is because it has not been produced in sufficient quantities to attract outside attention. Especially is this true of cotton, which grows abundantly on the Mandingan plains, and supplies material for all the clothing for the interior tribes. Kasada is one of the most useful breadstuffs in Liberia. It is used for bread, as a vegetable, for making starch, and for gruel and other dishes.

FOREIGN TRADE.

The total foreign trade of Liberia for 1905 amounted to \$1,214,363, of which \$669,525 were imports and \$544,828 exports. The imports and exports were distributed among the following countries: Ger-

many, imports \$359,784, exports \$299,272; England, imports \$271,066, exports \$237,984; Holland, imports \$17,450, exports \$7,467; United States, imports \$8,303, exports nothing; and all other countries, imports \$12,932, exports \$4. The principal articles of import consisted of cottons valued at \$118,941; rice, \$76,254; fish, \$54,638; spirits, wine, and malt liquors, \$38,471; boots and shoes, \$23,820; clothing, \$33,193; tobacco, \$28,603; provisions, \$34,064; manufactures of iron and steel, \$21,465, and breadstuffs, \$13,751. The chief exports were piassava, valued at \$164,594; coffee, \$136,705; palm kernels, \$148,941; palm oil, \$39,526, and ginger, \$19,797.

NO BANKS. BUT DEPRECIATED CURRENCY.

There are no banks at present in Liberia. An attempt on the part of some French capitalists to establish a banking institution proved a failure, as Liberians did not take kindly to the project. In the absence of banks, certain merchants, principally the Dutch and Germans, serve the dual purpose of bankers and brokers, greatly to their advantage. Besides the circulation of English and American currency, both of which are freely used in Liberia, there is a small volume of Liberian currency, and there is also a demonetized paper currency. So long as this system of meeting local obligations with a depreciated currency, negotiable at 40 to 50 per cent discount, obtains, the result will be disastrous. Merchants in the United States who effect deals in Liberia should be careful to stipulate in their contracts that all settlements must be paid in gold or such currency as can be redeemed in gold.

EAST AFRICA.

DEVELOPING BUSINESS LIFE.

TRADE CONDITIONS IN BRITISH PROTECTORATES—NEW COUNTRY WITH VALUABLE RESOURCES—COMMERCIAL OPPORTUNITIES.

Special Agent Raymond F. Crist furnishes a report on that portion of British territory in east Africa known as the "East Africa Protectorate," in which the geography and climate of the country, characteristics of the natives, present trade conditions, and opportunities offered to sell foreign products are described. The following report was mailed from Durban, Natal, September 20:

The East Africa Protectorate is the name given to the British territory on the east coast of Africa lying approximately between 6° north latitude and 4° south latitude. The coast line on the Indian Ocean between these two points, about 400 miles, forms with Italian Somaliland the eastern limits, Abyssinia the northern, and the British Uganda Protectorate, with Lake Victoria Nyanza, the western boundary. German East Africa lies immediately to the south. The Uganda Protectorate is a separate territory politically. In view, however, of its dependence upon British East Africa for its most direct communication with the rest of the world and for the transportation of its imports and exports it may well be considered with the East Africa Protectorate in discussing their commercial possibilities.

The Uganda Protectorate lies west of and adjoining British East Africa, extends westward to the Kongo State, and south to the portion

of German East Africa lying on the western side of Lake Victoria Nyanza, its northern limits being Egypt. The approximate area of British East Africa is 300,000 square miles, with an estimated population of 2,500,000. The area of Uganda is placed at about one-half that, containing in the neighborhood of 4,000,000 population. The extent of these protectorates is therefore from the low coast line of the Indian Ocean to the very heart of the African Continent, and presents most varied climatic conditions, ranging from the ultra torrid in the coast belt and in Uganda and the Lake Victoria Nyanza regions, to the milder climate similar to that of temperate zones, which is to be found in the highlands of British East Africa. It has been repeatedly stated by those who have lived in these regions for some years that within one day's journey by rail from the coast Europeans may permanently reside with security and rear families in these more propitious upland areas without the necessity for a periodical return to their home countries for recuperation, notwithstanding its tropical situation.

For the development of its natural resources these climatic advantages possessed by British East Africa over Uganda are counteracted in a measure by the presence in the first-named territory of a lower order of natives than those inhabiting Uganda. They are generally averse to acquiring material wealth, beyond a few goats and sheep, and at most a few head of cattle. With these possessions, together with a number of wives to till the soil and tend his flocks, a native arrives at a position of eminence among his people and finds no further need for laboring. The masses are apparently content to satisfy their few wants by the scantiest development of the soil, which readily yields such grains or fruit as are necessary for their sustenance. That it will be many years before the natives, especially those of the lower coast lands, are converted to the idea of labor as an advantage and necessity to life is the opinion expressed by all who profess knowledge of these people.

THRIFTY AND ENERGETIC PEOPLE.

On the other hand the Uganda tribes are a thrifty and quite energetic people, quick to take on European ways, and ready to work to the attainment of the means for gratifying their new wants. These qualities will probably result in eventually forming a black man's country within its borders. Little has yet been learned of the possibilities of the northern half of British East Africa, in which section no white settlements have been made. The coast belt in this part of the protectorate, and extending inland indefinitely, is looked upon as a sandy waste save along the borders of the Juba River, which defines the British and Italian spheres where cotton growing by the natives and a wooded belt testify to the fertility of the soil.

Through the southern half of this territory, which has the densest native and white population, the Uganda Railway passes to the fertile upland region and Port Florence on Lake Victoria Nyanza. The construction of this railway by the British Government, though an excessively costly work, amounting to about \$30,000,000 (£6,000,000), is a remarkable engineering feat and has offered the sole avenue by which the wealth of the protectorates, and a large part of German East Africa as well, have been enabled to find its way to the outer world. Without it many of the resources of a vast area far beyond the limits of

these two protectorates would still lie dormant and inaccessible. The gauge of the road is 1 meter, and when opened its equipment consisted of 100 locomotives, 35 of which were of American construction, as were also many of the steel bridges throughout its course. Its length is 584 miles, and the time consumed in traveling from the coast to the lake is forty hours.

Beyond Port Florence a regular steamer service in conjunction with the railway is maintained with Entebbe, the capital of Uganda, and with the other British and German ports on the lake. There is a daily freight service between Mombasa and the Port Florence terminal, the rates being 18 rupees per 112 pounds, and proportionate rates for lesser or greater weights and distances. Special rates for carload lots are also made.

Since the completion of the Uganda Railway, a great increase has been noted in exports, in quantity, value, and variety, due to the broadening of the field from which they could come. The entire territory surrounding Lake Nyanza, including German as well as British, yields large quantities of chillies, groundnuts, ivory, wax, and rubber, which formerly were carried by porters to the coast for transshipment at Zanzibar. Much of this produce was not brought down because of the expense.

Since the completion of the railway all of this finds its way to the coast by that avenue. In addition to this quantities of rubber and ivory from the Kongo State, and thousands of tons of supplies for that State annually pass over this road. This increase is demonstrated in the large earnings of the road.

AID FROM BRITISH GOVERNMENT.

In addition to building the Uganda Railway the British Government is doing much toward laying the foundation for the development of the resources of these regions in the near future. The turbulent Nandi tribes are being pacified, surveys made along the course of the railway, conditions defined under which concessions of large tracts of land may be obtained, the capabilities of the different sections of the country studied, and meteorological stations established, the reports from which are used in connection with the study of soils with a view to ascertaining the compatibility of climatic and other conditions with the growth of various produce.

Experimental farms are conducted for the further purpose of ascertaining the kinds of rubber, cotton, hemp, coffee, and other products of the soil which will be profitable for settlers to grow. The natural forests of the coast regions abound in valuable timber, rubber vines of the *Landolphia* varieties grow throughout the protectorates, and rubber trees of the West Coast countries are found in Uganda. Such grains as wheat, maize, barley, millet, and oats, garden vegetables, and particularly white potatoes and beans, are suited to the upland country, while coffee, rice, and tobacco may be cultivated in various sections.

While effort and money are thus being expended by the Government authorities and by private enterprise, still no material advancement has been made toward overcoming some of the most important of the natural obstacles to the agricultural and pastoral development of the protectorates. Uganda especially is unsuited as a habitation for large numbers of white men on account of the prevalence of the "sleeping

sickness," pestilential fevers, and the extreme heat, accompanied with great humidity. In those portions of the East Africa protectorate which are propitious to the white settler there is the tsetse fly or certain diseases of horses which are invariably fatal and have baffled all efforts to stay their ravages.

BASIS FOR FUTURE DEVELOPMENT.

From present knowledge of the country its future development must rest in its agricultural and pastoral possibilities and in the cultivation of such trees to which tropical conditions are congenial rather than to any mineral resources, for in this latter there appears to be a pronounced deficiency. There are great areas in the highlands eminently suited to grazing and where immense herds of sheep, goats, and cattle can find sustenance. Ostriches, which roam wild, are now being domesticated, and in time the raising of these birds for their plumage should prove profitable. Native stock of all descriptions is poor and comparatively unproductive, and will require years of inbreeding with imported stock before a high or even satisfactory standard can be attained. Imported stock are subject, however, to many diseases which has made their raising a difficult undertaking.

In considering the natural conditions prevailing in the coast belt, where hemp, cocoanuts, and rubber are indigenous, and the cultivation of which and of cotton may be carried on with profit, the question of incompatibility of climatic conditions to the average white man at once presents itself. Efforts are being made to encourage the growth of cotton in the lowlands, and with some highly satisfactory results, in small quantities of Egyptian cotton in particular. Sample shipments to England have been pronounced equal to the best Egyptian cotton. The large development of cotton growing on the low-lying coast belt appears to be awaiting the advent of the white settler in large numbers and in the conversion of the black native to the idea that it is necessary for him to work. These conditions will hardly be met for many years. There are too many attractive fields for the English emigrant, and at present the native steadily refuses to work for longer periods than three or at best four months out of a year. As the cultivation of cotton requires an experience and skill which the native barely acquires within that time, it is a fact admitted by all that the question of labor is the one almost insurmountable obstacle in the way of large production of cotton.

The representative in British East Africa of the English Cotton Growers' Association, which is doing much toward the establishment of cotton production throughout the British colonies, stated to me that the development of the native to an efficient working being was a question of generations and not of years.

CULTIVATION OF COTTON AND RUBBER.

Seeds have been furnished by the government authorities in large quantities for distribution among the natives for individual planting. I am informed by one of the officials having this matter in hand that it has been impossible to prevail upon any considerable number of natives to take seeds, and that there is now in his possession the largest part of those assigned to him which he is unable to dispose of.

Uganda offers better conditions for cotton growing by natives, as also the Lake Nyanza district in British East Africa, where natives

have grown marketable cotton for some years. During the fiscal year ended March 31, 1906, upward of 100,000 pounds of cotton were exported in about equal quantities from these two areas, valued at \$10,000, in round numbers.

As regards hemp, an American company has obtained a concession of 100 square miles near the station of Voi, 103 miles from Mombasa on the Uganda Railway, for cutting hemp, and it is believed that fibers from 10 feet to 15 feet in length are readily obtainable from the *sansaveria*, which grows in natural profusion in that section.

Rubber is being planted at various places along the coast, and while the industry is still in its first or unproductive stage it promises a good future. The favorite variety appears to be the *Manihot Gladioli* or *ceara*. In Uganda rubber-tree planting has been engaged in to a considerable extent, and the conditions there are reported to be ideal for a large production of this article.

The cultivation of the cocoanut palm in the lowlands for obtaining copra is looked upon as being a source from which large returns from capital may be obtained.

The mineral resources may be described as nonmetallic, inasmuch as neither the precious metals, iron, nor those other metals necessary in the arts and manufactures, have been found in paying quantities. Stone for building purposes is plentiful; limestone deposits are quite general; large supplies of soda have been located; clays suited to making tiles, bricks, and pottery are being worked at different places. Mica in attractive quantities has been found, and with marble constitute about the present known minerals of commercial utility. That any of these can be of more than local use is doubtful, with the possible exception of soda, for which there does not appear to be a sufficiently attractive demand in the world's markets to warrant exportation.

FOREIGN TRADE AND BANKING.

The foreign trade of these protectorates is practically all done at Mombasa, where there are located two banks, the National Bank of India, with a branch at Naviobi, and the Chartered Bank of India, Australia, and China. The transfer of money between points in the protectorate is effected through these banks, and also by means of postal money orders, for which latter method a charge of 1 per cent is made. Money is also frequently shipped by rail, on account of the cheapness of this method. This has recently been made more desirable, through the issuance by the East Africa Protectorate of notes of 5, 10, and 50 rupees. The standard currency (specie) in these protectorates is the Indian rupee, which is the unit.

The value of the rupee in English money is equal to 1s. 4d., with 15 rupees equal to £1 sterling. While the silver rupee is the recognized medium in all commercial transactions among the Europeans, there are various standards by which natives conduct their barter. Those who live in the immediate vicinity of the business centers and are in constant contact with white people prefer the copper pice (1 pice = 1 anna; 16 annas = 1 rupee) even to the silver rupee, and those living at a distance from civilization require payment for their produce in cotton cloth, beads, wire, and other articles of personal adornment, refusing to accept legal currency. For many years "Americani" (American cotton cloth) was the basis of values with the natives in their dealings with whites or Indians, who conduct most of the barter with them.

WEIGHTS AND MEASURES.

The standards of weights and measures differ with commodities. The kibaba is the standard in determining the weight of grain, and is equal to $1\frac{1}{2}$ pounds avoirdupois. The following table shows the various weights with their avoirdupois equivalents: 1 kibaba= $1\frac{1}{2}$ pounds; 4 kibabas=1 kaila or pishi of 6 pounds; 6 kailas=1 ngoma or frasila of 35 pounds; 10 ngomas=1 gisla of 360 pounds.

While the kibaba is constant, the relation of the gisla and frasila or ngoma to the kibaba varies. The frasila is used in weighing native produce of various kinds, including liquids, although the karasia, equal to $1\frac{1}{2}$ pints, is also used in ordinary small transactions, but in large quantities recourse is had to the frasila which is counted as 35 karasias. Some effort is being made to establish a uniform or constant frasila which is now indifferently calculated at 35 pounds or 36 pounds.

The wakiyah is the unit for the weighing of gold and silver, and is equal to an English ounce.

This market for foreign goods is a comparatively new one and but partially developed, but its prospects are exceedingly bright for a steady annual increase of its purchasing power, both in variety and value, and the development of the resources upon the migration of white settlers thereto. In the past two years the value of imports has grown from \$2,500,000 to \$3,300,000, and the exports have increased from \$1,100,000 to over \$1,600,000, a combined increase from \$3,600,000 to \$5,000,000.

FOREIGN TRADE.

VARIED RESOURCES—COMMERCIAL OPPORTUNITIES—RELATIVELY SMALL SHARE OF UNITED STATES.

Foreign trade is conducted either on indents, according to specification, or by purchasing in quantities and warehousing of such commodities as have a steady sale. Under the first-named method it is customary to allow a credit of three months to local merchants, during which time no interest is charged. After that period interest is computed, generally at 9 per cent per annum. The local trade of Mombasa in most all branches is in the hands of Indian merchants who have connections throughout the interior, either by agents in their employ or by branch shops, at which places the itinerant Indian trader obtains his stock of goods for barter with the native, taking in trade for the iron, brass and copper wire, beads, Americani, khangas, kaniki, and other cotton cloths, such produce as hides, skins, ivory, rubber, etc.

The field occupied by American commodities is practically limited to two items—gray cotton cloth or “Americani” and kerosene oil—all of which trade is in the hands of the one American firm located at Mombasa, which also maintains another branch in Zanzibar. The head office is in New York. That there is opportunity for the broadening of this field is amply proven by the position occupied by German commodities. The German firms in Mombasa in each instance represent houses whose main office is located in Hamburg or other city of Germany, which, by the presence in this field of personal representatives, have been enabled to enlarge the scope of their trade so that instead of participating in the sale of less than a dozen different commodities as in 1903, there are now sold of German manufacture, or

through merchants of Germany engaged in the foreign trade, more than treble that number.

By the establishment of branches of American houses with resident American representatives a close acquaintance can be formed with the demands and changing conditions of the market, and a wider participation in the sales of American manufactures effected. Although the percentage of American goods sold in this country is small, nevertheless America offers by far the best market for the produce of this territory of any country in the world.

IMPORT AND EXPORT TRADE.

The position of the various countries in the import and export trade of these protectorates is here shown for the fiscal years ended March 31, 1905 and 1906:

Countries.	Imports.				Exports.			
	1906.	Per cent.	1905.	Per cent.	1906.	Per cent.	1905.	Per cent.
United States	\$235,000	7	\$163,000	6.3	\$524,000	31.5	\$394,000	33.6
United Kingdom	1,139,000	34	827,000	32	193,000	11.6	184,000	15.7
British India	869,000	26	716,000	27.7	59,000	3.5	30,000	2.6
Germany	241,000	7.1	270,000	10.4	289,000	17.3	111,000	9.6
Netherlands	182,000	5.4	170,000	6.5				
Austria-Hungary	128,000	3.8	52,000	2	52,000	3.1	30,000	2.6
Australia	81,000	2.4	7,000	.8				
France	57,000	1.7	43,000	1.7	124,000	7.4	100,000	8.9
Zanzibar	7,000	.2	4,000	.1	118,000	7.1	152,000	13
All others	419,000	12.4	334,000	13	301,000	18.5	163,000	13.7

From the foregoing it is seen that the United Kingdom, British India, and Germany each sells more merchandise to these protectorates than the United States does, while the purchases of the United States during the two years shown exceeded the combined purchases of the three countries named.

In the passage of goods from America the usual time consumed is about one and a half months from New York, although delays may increase the time to three months. Transshipment takes place at either Marseille, Genoa, Naples, Trieste, or Aden. There are four lines of steamers plying between East African and European ports—the Messageries Maritimes, from Marseille; the Austrian Lloyds, from Trieste, both with monthly sailings; the Deutsche Ost-Afrika Linie, and the British India line. The two last call at all Mediterranean ports. The German line offers semimonthly sailings from Europe. Another British line is about to be inaugurated, and quite recently the British Parliament appropriated £80,000 for improving the harbor and creating dock facilities in Kilindini on Mombasa Island, to meet the increasing trade at that port.

PURCHASE OF COTTON GOODS.

Cotton goods constitute the largest and most important item of the imports of this territory and has increased from \$590,000 for the year ended March 31, 1904, to over \$1,000,000 for the corresponding year 1906. The positions of the principal competitors for this trade are here set forth:

Countries.	1903-4.	Per cent.	1904-5.	Per cent.	1905-6.	Per cent.
United States	\$136,000	25	\$133,000	19.1	\$194,000	19.6
United Kingdom	175,000	32	170,000	24.6	303,000	30.6
British India	133,000	24.4	219,000	31.5	299,000	30.2
Netherlands	50,000	9.2	120,000	17.3	147,000	14.8
Germany	51,000	9.2	52,000	7.5	46,000	4.6

From this it is evident that American cotton goods have not maintained their relative importance in this market along with the other competitors. While an increased sale has been made, it has not been proportionate with the increased demands for cotton cloths. This is due in a great measure to the vigorous entrance into the market by India mills, which are now making gray sheetings in imitation of American sheetings and also to the expansion in the variety of cotton cloths desired by the natives. To this latter aspect of the market the India mills have catered, in addition to producing the imitations referred to. This desire for variety has caused the Netherland printing mills to furnish the gaudy and large bizarre prints found in the many-hued khangas, which are in such popular favor among the natives. Many of the khangas, as well as large numbers of kaniki and striped scarfs, come from English mills, all of which have immense sales.

ENTERPRISE OF INDIA MILLS.

In contrast with the enterprise evidenced by our competitors in this market, the only American cotton cloths are the gray sheetings and drills, which have been offered for years. India mills have forged far ahead of their American rivals by producing a similar though inferior and lower-priced article, by making the same classes of goods as come from England, by catering to the demand for gay-colored prints, and by furnishing a cheap quality of cloth. These factors, coupled with the proximity of India, the low cost of labor, cheap raw materials, and inexpensive transportation by Indian sailing dhows, have enabled the Indian mills to surpass all competitors save England alone, whose supremacy is undoubtedly seriously threatened.

The large increase in the importation of cotton stuffs from Holland in the past few years is due to the growing popularity among the native tribes of a cotton print referred to above as "khangas." These cottons are woven in America and shipped to Holland, where they are printed in fast colors from designs submitted by Indian traders, through whom they are sold to the natives. The entire control of the importation of these khangas is in the hands of German resident agents representing Hamburg exporters. Khangas are worn as head and body coverings, or as body coverings only when one khanga is worn. A popular custom is to wear two khangas, one falling from beneath the arms to the knees, while the other covers the head and reaches to about the hips.

FABRICS THAT HAVE READY SALE.

Khangas are printed in lengths of 9 yards, or 5 khangas to the length. Four of these lengths comprise a package or "score" (20 khangas) and 25 scores are shipped in each bale. The bales are bound with iron straps, the contents being covered with oil paper and gunny sacking. The c. i. f. prices range from 10 to 16 rupees per score and retail at 1 rupee per khanga. The manufacture of khangas by American mills should be a lucrative business if conducted upon the same lines as at present followed by those now in the field.

Another article which American manufacturers might make for this market is that of striped unbleached scarfs, technically called "scarves." These "scarves" are woven in England, Germany, and India extensively, and also in Arabia to a fairly large degree. They are worn as loin

cloths and are popular and good sellers throughout these protectorates. The Arabian scarf comes from Muscat and is woven in two pieces, which are sewed together by the Indian merchant. Those coming from India and Europe have a red line woven in the center throughout the length of each scarf to imitate the Muscat scarf when sewed together, which is of better quality and higher in price. These "scarves" are shipped in tin-lined cases, 250 to the case. The c. i. f. prices range from 22 to 22½ rupees per score, and they retail at 2 rupees the scarf. Samples of these goods have been forwarded to the Bureau of Manufactures.

Kerosene oil is supplied by America and Asia, the latter furnishing three-fourths of all the oil consumed. This is because the price is much lower, although the quality is far inferior to the American product, which is furnished by the Standard Oil Company. The total import of kerosene in 1905-6 amounted to \$34,000.

AGRICULTURAL IMPLEMENTS.

In addition to cotton goods and kerosene oil, agricultural implements are imported from America to about one-fifth the total value of the imports. With the increase of farming in these protectorates a corresponding demand will arise for agricultural machinery of various kinds. This demand has already been evidenced by an increase of from \$3,000 in 1903-4 to nearly \$65,000 in 1905-6. Of this last amount American machinery constituted slightly less than one-fifth.

Recently interest has been further stimulated among the farming communities by the introduction of various American farm implements, such as plows, harrows, drills, cultivators, and farm wagons, and carriages and buggies, by an enterprising American manufacturer, through the medium of a traveling salesman. Orders aggregating several thousand dollars for the above-named articles were placed. The firm which gave this order is English, but is quite enthusiastic over the merits of these implements as compared with similar English makes now on this market. The members of this firm complained very bitterly to me about the seemingly unnecessary delay in the receipt of the goods, which they stated were ordered last February, and aggregated about \$4,000. The order, according to their calculation, should have been filled within three months, or, at the outside, five months after it was given.

A smaller order placed in September, 1905, they report as unfilled. The acknowledgment of the receipt of these orders by the manufacturers is the last word received here. This firm states that all terms as to prices, discounts, etc., are perfectly satisfactory, so far as they are concerned; that they have advertised the vehicles and implements extensively among their customers, and have explained to the manufacturers the advantage to be gained by a prompt delivery, especially so in view of the occurrence in September of an agricultural fair. Their failure to participate in such an exhibit when German and English agencies are well supplied will greatly reduce the chances of future sales of American implements in this market, which is limited in its demand. As this is essentially an agricultural territory, a larger field will be presented for the use of implements necessary for its development in the future, and there is a good opportunity for an increase in the sales of American makes if proper attention be given

the requests made for such supplies. In the last two years the sales of American-made agricultural implements in this territory increased from \$2,000 to \$12,500. During this period German makes were imported to the value of \$8,000. Previous to this all such articles came from England.

PROVISIONS AND CANNED GOODS IMPORTED.

As this region is but newly opened up to settlement by white people in any numbers, it has been necessary to rely upon the outside world almost entirely in the matter of foodstuffs. This has resulted in the importation for the past three years (previous to this records are not available) of over \$200,000 annually of provisions. These consist, in the main, of tinned vegetables and meats, preserved and tinned fruits, of which latter large supplies from California are in evidence. Crackers, soda biscuits, and other bakery products, confections, and all staple groceries constitute the bulk of the remaining foods imported. The sales of American provisions amounted to about \$25,000 annually.

Other items figuring in this trade, exceeding in value \$50,000 annually, are building materials, consisting of corrugated iron, practically all of which comes from England; paints and oils, from England and Germany; sugar, from Germany, Russia, and Austria-Hungary in about equal proportions; tobacco, from Holland and England; iron, steel, brass and copper wire nails, and cutlery, spirits and liquors, beads and wearing apparel. In none of these items is there American participation of any consequence. The United Kingdom supplies about 50 per cent of the provisions, iron and steel wire, cutlery, nails, and wearing apparel, and over two-thirds of the spirits and liquors. Germany furnishes large portions of the beads, brass and copper wire, principally wire of 6, 12, and 18 gauge, used by natives for personal adornment; ale and beer, earthen and glass ware, cutlery, nails, and other iron and steel wares.

From Austria-Hungary come considerable quantities of apparel, cotton goods, beads, earthen and glass ware, and miscellaneous hardware. Norway and Sweden supply almost all of the timber for flooring and inside finishings of houses. This constitutes practically the entire trade of these two countries with this section of East Africa. Practically the entire imports from France is embraced in the items of wines and spirituous liquors.

GRAINS AND FOODSTUFFS.

Such foods as rice, pulse, mtama, etc., are imported in large amounts annually, exceeding \$300,000. These grains and other foodstuffs particularly suited to the oriental palate, valued at \$50,000 additional, are imported from India and Burma each year, and with cotton goods constitute the bulk of their exports to these protectorates.

Since April 1, 1904, the duty on all imports has been 10 per cent ad valorem, with some few exceptions where goods are admitted free. Previous to that the rate was 5 per cent ad valorem. The exemptions from duty are made in coal, agricultural implements, live stock for breeding purposes, trees, plants, and seeds intended for cultivation, bags and sacks, and books, maps, and other printed matter—in short,

those articles whose importation is for the actual development of the resources of the protectorates.

VARIETY AND VALUE OF EXPORTS.

While American commodities make up but 7 per cent of the goods purchased by this country, America consumes upward of 30 per cent of its exports. The principal exports are hides and skins, ivory, rubber, wax, grains, chilies, and copra. Of these the East Africa protectorate furnishes one-fourth of the hides and skins, two-fifths of the ivory, all of the copra, and practically all of the rubber and grains, while the Uganda protectorate and that portion of German East Africa surrounding Lake Victoria Nyanza supply the remaining hides and skins, together with the chilies and wax and in conjunction with the Kongo State ship the rest of the ivory. The values of these exports for the year ended March 31, 1906, together with the countries to which they were destined, are shown in the accompanying table:

Articles.	United States.	Germany.	United Kingdom.	France.	Belgium.	Zanzibar.	India and Burma.	Total.
Hides and skins...	\$360,000	\$17,000	\$10,000	\$65,000	.....	\$5,000	.....	\$500,000
Ivory	113,000	6,000	69,000	.....	\$51,000	33,000	\$38,000	310,000
Rubber .....	.....	117,000	58,000	.....	39,000	1,000	.....	215,000
Grains .....	.....	32,000	13,000	.....	.....	22,000	.....	180,000
Beeswax .....	.....	89,000	6,000	6,000	6,000	.....	.....	107,000
Chilies	35,000	.....	10,000	10,000	.....	7,000	.....	75,000
Copra .....	.....	.....	.....	33,000	.....	4,000	1,000	47,000
Total.....	508,000	261,000	166,000	114,000	96,000	72,000	39,000	1,434,000

Austria-Hungary received \$43,000 in hides and skins, a small amount of copra and some fiber. The remaining grains, amounting to \$40,000, go to the various ports of the East Africa protectorate, while the balance, together with some chilies, are distributed to miscellaneous ports of Asia.

Other exports are raw cotton, amounting to about \$10,000, mangrove bark, potatoes, live stock, fiber, horns and teeth, which range in value from \$10,000 to \$15,000. Export duty is levied of 15 per cent ad valorem on ivory and gum copal, and 10 per cent on all other exports mentioned.

FUTURE COMMERCIAL OPPORTUNITIES.

This is a new and undeveloped country, but it has already developed a high purchasing power per capita. At present there are estimated to be but from 1,200 to 1,500 Europeans or Caucasians within the two protectorates, and yet the imports have risen to upward of \$3,000,000, with exports aggregating \$2,000,000, in round numbers, annually. Many of its commodities are lying untouched for want of sufficient or proper cheap transportation.

With the improvement of these facilities, as well as certain harbor facilities which may be said to be under way, many of those products which it is now impossible to move will be brought down from the interior. With the opening of the agricultural lands back from the Uganda Railway, which is bound to come in the not distant future, a great demand will spring up for the implements and machinery neces-

sary for their cultivation and development. Upon the advent of cheaper over-sea rates for freight many articles of utility, which for this cause can not now be purchased, will be imported.

In the figures of imports given in this report there is not included the amount of £974,402, which represents the value of imports on account of administration, construction, and maintenance of the Uganda Railway, administration of the two protectorates, goods in transit and specie, which last item equals over \$475,000. It is thus seen that there is opportunity here for an expansion of American trade which has probably not been realized.

In the furtherance of this development, increasing amounts of agricultural machinery and implements, cotton ginning and pressing machinery, fiber machines, various building materials, hardware supplies of all sorts, and in short all those essentials to the welfare and comfort usual to white people will be required. As money becomes freer and attains a wider circulation among the natives, their wants will expand, and in the supplying of all these commodities American manufacturers should get in on the ground floor if they desire to reap some of the benefits from the sale of goods in this the most promising field of the northern section of the east coast of Africa.

MAURITIUS.

EXPORTS EXCEED IMPORTS—BRITAIN CONTROLS THE TRADE.

Consul Theo. Botkin, of Port Louis, reporting on the foreign trade of Mauritius, writes:

The total value of imports into Mauritius during 1905 amounted to \$8,981,469, of which \$2,755,832 were for charges and exchange. The imports from Great Britain were valued at \$2,452,391, and from all other British possessions \$4,513,887, while all other countries furnished \$2,015,190. The leading countries, outside of the British Empire, from which merchandise was imported were: France, goods valued at \$867,769; Madagascar, \$252,550; Argentina, \$190,589; United States, \$143,143, and Germany, \$116,556. The chief articles imported from Great Britain consisted of cotton cloth valued at \$376,178; hardware and cutlery, \$145,028; fertilizers, \$101,774; haberdashery, \$62,477, and wool and cotton mixed goods, \$26,854. British India's imports were chiefly breadstuffs to the value of \$616,874; rice, \$1,842,231, and lentils, \$45,299. The imports from France were principally haberdashery, \$83,854; cotton goods, \$36,216; hardware and cutlery, \$28,789; earthen and china ware, \$22,840, and wool and cotton mixed goods, \$21,506.

The United States share of the imports consisted of the following articles: Provisions, \$29,759; petroleum, \$28,393; fish, \$4,845; manufactured tobacco, including cigars and cigarettes, \$61,101; hardware and cutlery, \$1,591, and all other articles, \$580.

The total value of exports from Mauritius in 1905, amounted to \$12,281,015, an excess over the imports to the amount of \$3,299,547. Sugar was exported to the value of \$10,862,778, the best customer being British India, which took \$6,268,769 worth, or nearly 60 per cent of the total shipments. Of the total exports, Great Britain took \$897,026 worth; British possessions, \$11,069,366 worth, and all other countries the remainder, amounting to \$314,653.

MADAGASCAR.

INCREASE IN COMMERCE.

Consul W. H. Hunt, of Tamatave, reports on the commerce of Madagascar as follows:

The general commerce of Madagascar and dependencies for 1905 reached the sum of \$10,425,429, an increase of \$1,590,498 over 1904. The imports were valued at \$6,072,508 and the exports at \$4,352,921, an increase over 1904 of \$973,567 in imports and \$616,930 in exports. The principal imports were: Woven fabrics, \$2,688,055; farinaceous foodstuffs, \$452,323; spirits, \$715,338; articles of metal, \$429,495; stone, marble, etc., \$265,252; groceries, \$247,484; and animal produce, \$131,891. Woven fabrics, mostly cotton, increased \$1,194,293 over 1904, due largely to the old stock having been sold and to the laying in of a new supply. The principal exports were: Gold dust, \$1,326,867; rubber, \$934,299; hides, \$716,136; fiber, \$458,921; oxen, \$207,826; beeswax, \$191,918, and dried vegetables, \$89,840.

NIGERIAN RAILWAY EXTENSION.

According to the West African Mail, Sir Walter Egerton, governor of southern Nigeria, has sent the following message to the secretary of the Lagos chamber of commerce respecting the extension of the railway from Ilorin to Jebba, on the Niger:

"I have much pleasure in informing you that I have received a telegram from the secretary of state saying that the locating survey of the railway from Ilorin to Jebba has been authorized to be taken in hand at once and completed as soon as possible; also the construction of a mole 3,800 feet long on eastern side of the harbor entrance, at an estimated cost of \$750,000; also enlargement and strengthening of Government customs wharf, at a cost of \$250,000, so that ocean steamers can be berthed there; also the purchase of a small pontoon dredger for \$15,000, for use in reclamation work, in addition to the bar dredger already ordered, at an estimated cost of \$250,000. I am sure this news will be received with great pleasure by all residents in Lagos colony."

ASIA.

INDIA.

COMMERCE STEADILY INCREASING.

FOREIGN TRADE CLIMBING TOWARD THE BILLION-DOLLAR MARK—HOW AMERICA STANDS.

In presenting a review of the trade of India, Consul-General William H. Michael, of Calcutta, deems it best to institute comparisons extending farther back than the previous year in order that the reader may more fully judge of the increase, and on that basis be able to calculate the probabilities of the future trade of that vast country.

The following table will show with fair accuracy the trade of India with the various countries of the world in merchandise imported and exported for a period of five years:

Country.	1901-2.	1902-3.	1903-4.	1904-5.	1905-6.
Europe	\$431,326,830	\$438,798,960	\$549,328,930	\$557,725,080	\$565,716,690
Africa and adjacent islands....	37,936,140	46,711,500	29,033,400	26,708,600	26,961,440
Asia	163,268,490	159,475,800	183,819,900	185,583,970	205,887,830
America.....	38,300,460	39,750,810	43,068,190	49,275,270	64,200,840
Australasia.....	8,911,980	6,353,490	8,334,150	6,684,810	10,894,290
Total	679,743,000	685,090,000	784,681,000	838,787,000	873,684,000

When the new system of registering imports by country of consignment and exports by country of destination is inaugurated and in successful operation the trade with America will appear to have unduly increased, for the reason that under present methods a share of the trade with America is credited to Europe and Asia. The total trade with America, of which 78.5 per cent was with the United States, increased about 30 per cent.

The trade with Africa was unduly swelled up to 1902-3 by shipments of produce consigned to Port Said to await orders for delivery being credited to Egypt. The apparent falling off in trade with Africa is not, therefore, real. The trade with Asia was practically the same during the four preceding years. The trade with Europe fell from 66.5 per cent of the whole to 64.8 per cent. The exports to Europe were slightly lower than the imports therefrom.

The export trade, on the other hand, with the other continents largely exceeded the import trade. For example, the exports to Africa were double the imports from that country; to Asia, four and a half times; to Australasia, three times greater; and to America, eight times greater. In 1904-5 the export trade with America was nine times greater, thus showing a falling off in exports, while there was a decided increase in imports, especially from the United States.

SHARE OF LEADING COUNTRIES.

The table following exhibits India's trade with each principal country from 1902-3 to 1905-6, including June of the latter year:

Country.	1902-3.	1903-4.	1904-5.	1905-6.
United States	\$32,168,400	\$34,166,160	\$37,017,090	\$50,395,290
United Kingdom	279,386,910	317,809,140	330,580,470	361,199,850
China	60,034,590	66,120,780	71,376,690	76,777,140
Germany	30,714,080	58,541,010	59,526,720	63,070,920
France	34,813,350	37,868,820	37,503,510	37,305,840
Japan	22,125,840	32,143,940	36,030,720	37,044,480
Belgium	26,588,760	33,217,500	39,334,350	36,254,460
Straits Settlements	22,310,430	32,578,260	31,383,000	29,582,850
Austria-Hungary	19,043,970	23,199,330	28,730,790	29,441,610
Ceylon	17,308,830	17,859,270	18,925,500	20,998,560
Italy	14,040,510	19,598,040	18,287,940	19,633,020
Mauritius	10,235,600	12,733,050	10,545,150	10,760,970
Australia	5,206,740	7,041,870	7,237,560	9,612,900
Java	2,807,310	5,247,320	8,151,330	9,337,690
Holland	4,712,400	8,591,880	9,958,080	7,858,620
Egypt	26,467,650	6,866,030	6,368,140	6,452,490
Russia	10,218,120	10,848,090	7,443,810	2,835,520

India's trade with Russia fell off 61.3 per cent. Of course there were extraordinary causes for this growing out of disturbed trade conditions in Russia.

SOURCES OF IMPORTED MERCHANDISE.

The sources of imported merchandise in the trade accounts of India assume to be those countries from which the goods were shipped in the vessels that landed the goods in India. In the case of transshipment the port of transshipment appears as the port of origin, unless a through bill of lading was granted at the port of original shipment. When a through bill of lading has been granted the country of first shipment is regarded as the country of origin.

The new method already referred to will soon come into force by which the true countries of origin can be correctly ascertained. The comparisons made in percentages in the table below are based on the old system, and are as reliable as they can be made:

Country.	1901-2.	1902-3.	1903-4.	1904-5.	1905-6.
United Kingdom	64.5	66.3	64.9	65.2	66.7
Belgium	3.7	3.9	3.9	3.6	4.3
Germany	3.7	2.7	3.4	3.9	4.2
Austria-Hungary	4.8	3.2	2.6	4.1	3.9
Straits Settlements	2.9	2.9	2.9	3.2	2.4
United States	1.4	1.5	1.5	1.1	2.2
Mauritius	2.4	2.5	3.1	2.1	2.0
Java .....	.5	.7	1.4	2.1	1.8
China	2.2	2.8	2.3	2.0	1.7
France	1.7	1.8	1.9	1.9	1.7
Japan .....	.87	1.0	1.5	1.2	1.2
Italy	1.2	1.0	1.1	1.3	1.1
Russia	3.9	3.4	2.9	1.7	.27

The United Kingdom maintains its predominance. Belgium appears to hold second place with 4.3 per cent; but it is well known that large quantities of German goods shipped from Belgian and Dutch ports are erroneously credited to those countries. In all fairness Germany should be given second place. Austria-Hungary, notwithstanding her

large shipments of sugar, has to yield to Germany that place. Java and Mauritius have had India's sugar trade pretty much to themselves since July, 1905, and have maintained their position. The United States has doubled her share, while Russia has to all intents and purposes dropped entirely out of the table. The importance of China's direct shipments has decreased, as also have the imports from the Straits Settlements. The latter as a port of transshipment does much to confuse the statistical records of the East.

Imports of Government stores are not included in the figures. These are large, amounting in 1905-6 to \$29,778,000. Material for State railways makes up a large item in the total of imports. By including the imports for State railways and the Government stores, civil and military, we have to the credit of the United Kingdom as follows:

	Per cent.
1901-2.....	67
1902-3.....	68.9
1903-4.....	67.3
1904-5.....	67.4
1905-6.....	68.6

GENERAL DISTRIBUTION OF THE EXPORT TRADE.

The value of the exports of Indian produce and manufactures during the last five years was distributed in the ratios given below:

Country.	1901-2.	1902-3.	1903-4.	1904-5.	1905-6.
United Kingdom	25.1	25.2	27.1	27.5	25.3
China.....	14.5	12.6	11.9	12.6	13.5
Germany	8.4	8.0	9.9	9.2	8.9
United States.....	6.9	6.7	6.0	6.3	8.2
Japan.....	5.7	4.6	5.6	6.3	6.3
France.....	7.3	7.2	6.6	6.2	5.9
Belgium	3.9	3.9	5.1	5.4	4.0
Straits Settlements.....	5.2	6.0	4.8	4.1	3.9
Ceylon.....	3.7	3.5	3.0	3.2	3.5
Italy	2.4	2.7	3.3	2.7	2.9
Austria-Hungary	2.0	2.5	3.2	3.0	2.8
Egypt.....	4.4	6.1	.9	.8	2.2

Egypt, which was sixth in the list in 1902-3, fell to the last place in 1903-4, in consequence of the change made in crediting to the countries of final destination, instead of to Egypt, the large shipments of produce, principally rice and wheat, originally consigned to Port Said to await orders for delivery. This last position she has held for three consecutive years. It is not unlikely that the position of China will be affected considerably when exports are strictly considered with reference to country of destination in view of the fact that Singapore and Hongkong are transshipment ports for the Eastern trade. She may lose second place, which she has held for years.

The United Kingdom continues to lead all other countries, which is but logical, considering its relation to India, yet its proportion to the total export trade with India experienced a relative decline of 2.2 per cent. Italy and Austria-Hungary exchange places owing to a proportionately larger increase in the exports of India to Italy.

The excess of exports over imports, including treasure, for each of the last six years was as follows:

Year.	Including Government transactions.	Excluding Government transactions.	Year.	Including Government transactions.	Excluding Government transactions.
1900-1901.....	\$54,866,180	\$72,938,600	1903-4.....	\$123,560,910	\$146,329,920
1901-2.....	88,828,190	104,808,830	1904-5.....	99,713,460	116,945,290
1902-3.....	91,925,460	111,819,610	1905-6.....	110,684,970	145,596,830

In striking the balance of India's trade it must be remembered that the figures quoted above represent only the registered trade, and that only at British India ports. Some adjustments therefore have to be made on account of the unregistered trade and the trade of the French and Portugese settlements in India. The unregistered trade consists largely of commerce carried on (chiefly by native craft from ports in the native states on the west coast of India) with Persia, Arabia, and Ceylon, and it is supposed that the exports therefrom greatly exceed the imports thereto. The value of the large reexports of pearls from Bombay is also not registered, as the pearls are sent away from India by letter post, and the trade is therefore not recorded.

It should also not be overlooked that the exports of Government stores in some years, as, for instance, at the time of the South African war and the Somaliland expedition, unduly swell the total exports from India; they are also imperfectly recorded, for there is no obligation on the part of the officials concerned in the export of those stores to pass them through the customs.

COMMERCE OF FRENCH INDIA.

The trade of the French settlements has been in the five years ending 1904-5 (the statistics for 1905-6 have not yet been received) as follows:

Year.	Imports.	Exports.	Excess of exports.
1900-1901.....	\$480,587.90	\$1,811,531.04	\$1,320,943.14
1901-2.....	449,293.68	4,149,521.40	3,700,218.72
1902-3.....	572,957.88	3,367,570.14	2,794,612.26
1903-4.....	1,233,443.64	1,959,377.64	725,924.05
1904-5.....	565,438.17	4,123,998.45	3,558,560.28

The French settlement, denominated on the map as Chandnernagore, is situated on the right bank of the Hughli river, 22 miles east from Calcutta, on a tract of land 3 miles square, and has a population of 26,831. This tract of land belongs to France, by virtue of a pact between Great Britain and France, made when India was taken over by Great Britain, after the mutiny in 1857. The language spoken is Bengali. The government of the colony is under an administrateur.

The other French settlement is known on the map as Pondicherry, and is located on the east coast of India, about 100 miles south of Madras and 200 miles north of Ceylon. The tract contains 113 square miles and has a population of 156,094. The inhabitants speak a patois of French and Tamil, the latter being the language of a class of natives in Ceylon and in southern India. The government of this tract is administered under a gouverneur. This tract was also held by France under a convention with Great Britain, made after the mutiny, when Great Britain took over India.

PORTUGUESE INDIA'S IMPORTS AND EXPORTS.

The trade of the Portuguese settlements for the five years ending 1903-4 (the statistics for 1904-5 and 1905-6 not having yet been received) has been:

Year.	Imports.	Exports.	Excess of imports.
1899-1900.....	\$49,335.99	\$16,366.02	\$32,969.97
1900-1901.....	48,527.49	16,068.02	32,459.47
1901-2.....	88,241.67	11,880.00	76,361.67
1902-3.....	71,186.94	52,188.51	18,998.43
1903-4.....	47,591.28	80,028.30	^a 32,437.02

^a Excess of exports.

The Portuguese settlement known as Goa is located on the west coast of India, about 250 miles south of Bombay. The population is about 500,000 and the tract of land contains about 1,062 square miles.

The languages spoken are Portuguese, Goanese, Konkani, and English. The tract is thickly populated, having nearly 5,000 people to the square mile. There are four towns and 400 villages, 100 parishes and 90,000 houses within the tract. The people are industrious and thrifty, as the trade tables show, although the French settlements make a far better exhibit in the way of trade.

INDUSTRIAL DEVELOPMENT IN NEAR FUTURE.

The manufacturers and exporters of the United States, when considering the trade of India, must not leave out of the calculation the item of home production. If India worked up all its cotton, wool, hair, hides and skins, jute, and metals and utilized all of the other resources that belong to its rich domain by converting them into manufactured products there would be little left to be supplied by other countries. Despite the drawbacks that retard the progress of India it makes a fairly creditable showing in manufactures. In 1905 there were 1,336 factories run by steam that were owned by home companies or individuals. The cotton mills (186) are principally in Bombay, the jute mills (40) are in Bengal, near Calcutta, and the rice mills (121) and sawmills (71) for the most part are in Burma. The factories and mills give daily employment to 587,560 persons. Besides the mills operated by steam, water, and electric power, there has been a revival of the hand looms, and the output from these is double that of the mills. It requires an enormous amount to clothe the millions of people in India, who wear little except cotton the year round. The coolies and poorer classes wear the common muslins, while the higher classes wear the mulmul or high-grade muslins. The mulmuls or high grades retail at 5 to 13 cents a yard and common muslins from 3 to 4 cents. A suit of clothes for the average poor person of India costs from 15 to 20 cents and the head gear or turban as much more. The females require more goods for a suit, but do not wear the turban.

INTRODUCING AMERICAN GOODS—CASTOR OIL AND JUTE.

How best to break into the trade of India may be indicated briefly. The most businesslike way would be to establish in Calcutta, Bombay, Rangoon, and some of the large inland cities of India agencies for the exploitation of American goods. One live man could, with cheap help,

manage such an agency, and live men should be kept on the road, operating from these agencies, for the introduction and sale of goods kept for exhibition and sale purposes. It is believed that this is the only way by which American manufactures can be successfully introduced into India.

The exports of castor oil from Calcutta during the first seven months of 1906 are stated at 31,353 cases, 21,162 half cases, and 2,695 drums, in all 760,443 gallons. The shipments for the same period of 1903 amounted to 980,049 gallons. Liverpool, South African ports, and Singapore took the major part of the castor oil exports.

Out of a total of 4,139,555 bales of jute exported from Calcutta and Chittagong this year the United States took 581,395, Europe took 3,546,433, and other countries 11,728. The fiscal year 1902 was the record year for the exporting of jute, but the present year is within 12,000 bales of the high-water mark, and the prices have ruled much higher, so that the value of this last crop has averaged greater than for 1902.

CHINA.

PROSPECTS AT ANTUNG.

GERMAN CONSUL DESCRIBES YALU RIVER COMMERCE.

Writing from Peking, Minister W. W. Rockhill transmits the following copy of a report made by the German vice-consul at Chemulpo, Korea, to the German legation at Peking on the subject of a visit to Antung and on the commercial prospects of that Manchurian port:

Antung is best reached from the south by way of Chemulpo, Seoul, and Pingyang. It still takes almost two days to make the trip over the railway from Chemulpo to New Wiju, about 310 English miles, since the road is not yet finished. As far as Pingyang there are two daily trains; from there northward there is only one train as yet. Only passenger cars are forwarded and of these only third class, but work will be vigorously carried on improving the grades by tunnels and cuts. With this accomplished Antung should be reached in twelve hours from Seoul and Chemulpo.

The old Korean frontier town is Wiju, on the Yalu River. Here the bridge question is a difficult one, but engineers have surmounted the great technical difficulties. They have, some 4 miles beyond there, established the provisional terminal station of the North Korean Railway and named it New Wiju. Lower down the Yalu River, on the Manchurian side, lies Antung. Travel between the two places is now accomplished by boat in about half an hour. The railway bridge over the Yalu, however, will make the connection between the North Korean road and the Mukden road, and it has already been ordered.

JAPAN'S ANTUNG SETTLEMENT.

The Japanese colony lies about 20 English miles from the mouth of the Yalu, close to the river. It is a large square, with broad streets crossing each other at right angles. The newcomer is surprised above all by the large dense colony. The Japanese settlement, as well as the larger part of the Chinese city, being situated on the low

grounds of the river, becomes flooded during the rainy midsummer season. In order to overcome this the military administration has had the entire Japanese city encircled by a wall about 12 feet high, on the inside of which there is a broad moat, which will receive the water collecting in the streets. With a steam pump and a 70-horsepower machine they raise the water and haul it out. The ground, as in northern China, is rich land; the result is therefore a monstrous dust in dry weather and deep mire in wet weather. The Japanese administration, however, is seeking to remedy this and has ordered the main streets to be paved.

Everywhere good houses and shops are to be seen. The Japanese population numbers about 5,000, of which only a few dwell in the Chinese city. But the city administration seeks to force their countrymen to come into the colony. Different large Japanese firms, as well as two Japanese banks, have erected here their branch offices. To avoid internecine competition, the Government appears to have stepped in, and has, it is said, instructed the Daiichi Ginko Bank to go to New Wiju, its field being Korea, while the Yokohama Specie Bank will have Manchuria. The telegraph, mail, and telephone are self-evident in the Japanese colony, which is also erecting a magnificent new post-office building, in appearance like a great Japanese temple.

BUSINESS LIFE OF ANTUNG.

From the Japanese settlement a ten minutes' walk up river brings one to the Chinese city of Antung, which is seen along the river many miles. Here a stirring life rules. In the shops everything that the Chinese could wish for is offered for sale. The largest Chinese firms expose their goods in shops 30 to 40 feet long, with richly decorated and gilded signboards standing by the entrance, indicating the wares they have for sale. They possess large premises, and here goods worth \$25,000 and more may be seen. In all there are some 170 small and 80 large Chinese firms in Antung, every one with a capital of from 10,000 to 40,000 taels (Chinese customs tael = 80.8 cents). Most of them have their principal houses in Chefoo, sending their people in the spring to Antung, where they remain until the close of navigation. The Chinese city of Antung has between 60,000 and 80,000 inhabitants. In the market place vegetables, fruit, and fresh meat are on sale every day, and in all open places there are booths where any persons for one "cash" or by a lucky draw from the lottery cup can buy himself cakes and the like.

In particular there is stirring life in the port, where some 200 to 300 great Chinese junks lie. For the time being only a little business can be done by these, because the Chinese are not now able to compete with the Japanese. The Japanese import their merchandise free of duty either direct from Japan, or in case it comes from Korea, with return of the duties paid there; while the Chinese who have bought goods in Chefoo or Shanghai have already paid duty and over and above they must still pay a likin tax. There is a likin station in the heart of the city.

ARTICLES OF EXPORT AND IMPORT.

The export of wood, the principal article, has, for the time being, entirely ceased. The river in previous times must often have been literally swarming with Chinese junks loaded high with wood, while I saw not a single wood junk. To my inquiry a Japanese

explained that the military administration had in the preceding year levied a tax of 1 trunk upon 11 trunks, while the Chinese asserted that the wood was generally taken away in part without payment to the people. The result has been that all persons engaged in this business in Antung have combined to bring no more wood down the Yalu. It is reported that a large Chinese-Japanese company has been formed, which will carry on the whole wood trade. They hope to again receive this autumn the first shipment of wood from the north. The greatest part of the wood goes to Tientsin and Chefoo.

Precise details regarding the export trade were not to be had, since statistics were not available. The declaration of goods varies between 4,000,000 and 11,000,000 taels annually. Another article of export consists of wild silk cocoons. These are brought to market in baskets of 20,000 to 30,000 cocoons and most of them are sent to Chefoo, where three silk-spinning factories are in operation. The export, according to a statement, must amount to many million taels. Silk and silk waste are also exported. Hemp is also produced, although apparently not of a very good quality. It is exported to China and is used there exclusively for making cordage.

Articles of import are American sheetings, heavy Manchester shirtings, as well as some Manchester and Bradford goods, such as lastings, Italians, brocades, etc. An important trade can also be done in petroleum, flour, and iron. Of German articles, I saw aniline dyes, tin boxes, and woolen covers. The greater Chinese firms, some of whom I visited, had a large stock in these articles. They told me everywhere that business was for the moment very bad; that they could not compete with the Japanese who had no import duty to pay.

It is believed that Antung in the spring of 1907 at latest will be open to foreign trade and that through the establishment of a Chinese custom-house the Chinese then will be on an equal footing with the Japanese. It is also hoped that by the building of the railroad to Mukden to bring more life into business. Now a narrow-gauge military railway, which was built by the military administration, takes you there in about two and one-half days, but it is out of the question for the transport of goods. The building of the normal narrow-gauge will begin next spring, and when it is ready for use the whole of southern Manchuria as far as Fongwongtschong will be supplied.

YALU VALLEY TRADE.

The most important territory for the trade of Antung is at present the Yalu, some 200 miles long, whose upper district delivers wood, while silk and hemp find their way to the port markets down the tributary stream, the Aiho. With accurate knowledge of these facts, it is said, the improvement of the rivers above Antung is planned by the Japanese Government. By blasting the rock away in six or seven places the navigation of the upper Yalu can be made less dangerous. The river basin of the Yalu on the Korean side of Antung will also be cared for. Six Chinese firms devote themselves very particularly to the Korean import trade.

A good trade is now secured for Antung through the rich back country and through its favorable position, though the river opposite it, below the city, offers the greatest difficulties for regular navigation. Only vessels drawing 8 feet of water can reach Antung and these must anchor below the city in a place of high water. Vessels drawing only

6 feet of water can only go up the river without hindrance. According to the declarations of the Japanese, river improvement below Antung is not feasible, because the Yalu between there and the sea during the rainy season often completely changes its bed. There is a project of a railway from Antung to the mouth of the river to Tatungkou, some 25 English miles in a southwest direction from Antung. Others incline to Takuschoon as a port, since, being provided with a large bay, it would offer an ideal anchoring place for the largest ships. But it has the disadvantage of lying about 30 miles farther west than Tatungkou. Should one of these proposals be realized, the future of Antung as a trade port would be assured.

COMMERCE OF AMOY.

DIRECT LINE TO THE PHILIPPINES SUGGESTED.

Consul Harry L. Paddock calls attention to the fact that of the importations into Amoy the United States supplies practically all the wheat flour and a large portion of the kerosene oil.

In 1905 the import of American flour into China, exclusive of Hongkong, which is not a part of China, but British territory, amounted to 119,672 piculs (7,978 tons), valued at \$370,000 United States gold, and the consumption of wheat flour in Amoy alone amounted during the same year to 8,033 tons, valued at \$323,538.

Of the entire importation from America, Amoy consumed fully 80 per cent. The balance of Amoy's flour purchases were of a very poor grade Japanese and Chinese productions, which sold at an exceedingly low price and were transported at low freight rates by the Japanese steamship companies. The American flour consumed here is bought in Hongkong from agents of American milling companies with a large broker's commission tacked on. This, with the extra expense of transshipping from trans-Pacific steamers to local coasting vessels, keeps the price of American flour high and opens the market to the Japanese and Chinese flour. But in spite of the increased expense of the American product, the local demand for it is greater than the supply.

Several progressive Chinese merchants have approached me on the subject of obtaining a direct importation from ports of the United States to Amoy, in one bottom, in order to avoid the expense met in Hongkong. Under present conditions Amoy is not a port of call for the regular trans-Pacific steamers on the outward trip, and is only made one on the homeward trip during the tea season, from June 1 to October 1 each year; consequently such vessels can not be considered available for the direct importation of flour to Amoy. But in order to supply the demand now existing for American flour at prices that can compete with the Japanese product, direct shipments should be made to Amoy.

As the exports of Amoy, barring tea, are consigned to the Philippine Islands, it might be well for shippers at Pacific coast ports in the United States to consider the feasibility of operating a freight line to Manila via Amoy. Such vessels could bring a consignment of flour to Amoy and take on old hemp bags, paper, and the general Chinese supplies that are shipped from here to Philippine ports. The present export trade from Amoy to the Philippine Islands is done via Hongkong, where the expenses of transshipping are again met with.

The Standard Oil Company is rapidly increasing its trade in Amoy. Its chief competitors are the Royal Dutch Petroleum Company and some Japanese firms. The American grade of oil is so far superior that, although the agency was established but a short time ago, its sales are now equal to those of the Dutch company and far surpass those of the Japanese firms. Trade conditions generally in Amoy are difficult, requiring a special study and system, and it is only those firms who, following the system of the Standard Oil Company, can meet with the success that company has met with, namely, by the establishing of branch houses and agencies under able American managements.

TRADE CONDITIONS.

AMERICANS MUST STUDY WANTS OF PEOPLE.

Consul Paddock also states that it is clear from the catalogues and letters of inquiry received from American firms that they do not understand the Chinese people, their customs, habits, condition, wants, or business methods. He writes:

In the first place, goods from the United States which are exported to China solely to satisfy the demands of the foreign element in China do not constitute a trade with China, but simply with a very small transient population; nor does this sort of trade, as so many of our American manufacturers seem to think, stimulate the Chinese people to the adoption of American products. American merchants should bear in mind always that the Chinese people are poor; that labor is so cheap that it enters not at all into the cost of production of articles used by the Chinese; that the Chinese deal only in their business relations with those in whom they have great confidence; and, above all things, that catering to the oriental wants must be done by supplying, not occidental, but oriental articles.

The comparative poverty of the Chinese is a great bar to the sale of foreign-made goods, for our cost of production is so high that we can not put an American-made article on the market here that will be within the financial reach of more than one out of one hundred natives. The introduction of American goods must be done through capable, tactful, and energetic agents, who are also patient, and preferably those who know the Chinese character and speak the language. These agents must cultivate the friendship of the Chinaman, which friendship they will find strong and lasting, and then slowly educate the Chinaman to the advantages of American-made goods. This takes time and money, but the ultimate reward will more than repay the American firm that cares to attempt it.

CONDITIONS MUST BE STUDIED.

Finally let American firms study the wants of the Chinese and let them manufacture Chinese articles in America for sale in China. In this connection I beg to call the attention of American firms to those German manufacturers who make the rubber overshoes worn by the Chinese people. These overshoes are not like the overshoes worn in Germany, but they are what the Chinese wear, and hence the German firms control the market in that line.

Let American firms be guided by the German and English firms and manufacture such things as the Chinese want, instead of shipping over here the customary American articles, and the business can be done.

American firms are independent in their methods and are wont to say "let others come to our way of doing business;" and hence these suggestions may be considered un-American, but if American firms care to make much of oriental trade, let them be guided by the methods employed by other foreign firms who do maintain an extensive trade with China, while the American fails. Remember that the China of to-day is not far removed from the China of a thousand years ago; it is oriental, and so long as it remains oriental, business must be done in oriental fashion and by oriental methods.

MANCHURIA.

GOOD TIMES SHOULD RESULT IN LARGER VOLUME OF TRADE.

Consul-General Thomas Sammons, of Newchwang, sends reassuring news of the purchasing power of Manchuria, which is entering into a prosperous era of development and trade. Mr. Sammons writes:

Crops in Manchuria are again abundant in 1906, as in 1905. Transportation facilities for handling the products of the soil are improving slightly. The ancient two-wheeled cart and river junk will, however, continue to carry a large share of the tonnage, both as regards outward and inward cargo. At the port of Newchwang many new wharves are being constructed, partially by private enterprise, but more particularly under plans formulated by the Japanese military administration. New godown or warehouse companies have been organized, with ample wharf accommodations, and, with the modern facilities now being provided, Newchwang will be able to handle an immense cargo tonnage without delay or inconvenience to shippers. Both the Standard and Sumatra oil import managers are building new storehouses and wharves. Native Chinese companies are also constructing new docks and increasing their steamship transportation facilities.

TRANSPORTATION OF AMERICAN GOODS.

Flour from the Pacific northwestern States of America is now landed at Newchwang and Vladivostok direct for \$5 gold per ton. Kerosene oil is also now brought direct to Newchwang via the Suez Canal from New York at approximately \$7.50 to \$8 gold per ton. Beginning with the season of 1905 the tendency has been toward direct shipment, although in a recent shipment of cotton piece goods from Boston and New York and consigned to Tientsin the cargo was put off at Shanghai to be transshipped by a local Chinese coast steamship company.

The Pacific and Atlantic coast steamers carrying cargo to Newchwang find there no return cargo, as a rule. They therefore steam to Chinese and Japanese ports for a miscellaneous cargo of curios, tea, etc. Of the dozen British steamers on the New York, Boston, and Oriental Line (comprising steamers owned by Andrew Weir & Co., of Glasgow; the Prince Line, operated by James Knot, of Newcastle, and the Houlder-Middleton Company) an average of one each month leaves the Atlantic coast carrying cargo for Aden (for North and South African ports), Colombo, Singapore, Hongkong, Shanghai, Tientsin, Newchwang, and Japanese ports. Some of these steamers carry Manila cargo and generally enter into the transportation business in handling Atlantic seaboard freight of American consigned to the Orient. The bulk of the American piece-goods tonnage, however, still crosses the

United States by rail and reaches China via the Pacific Ocean steamship companies. For a time the New York-Boston-Oriental freight rates threatened to interfere with the American rail and Pacific-Oriental carrying tariffs. At present the rates prevailing indicate a settled policy of maintaining average dividend-paying freight schedules.

HIGH FUEL PRICES—COTTON MILL CLOSES.

Although there are abundant coal deposits in Manchuria, the price of coal still remains abnormally high, averaging from \$6.50 to \$8.50 gold per ton for the common grades. At the Fushan mines, where a vein 100 feet in width is available, the Japanese are turning out only 1,000 tons a day. While this and other southern Manchurian coal properties are capable of supplying coal to this part of the world, and will no doubt later figure largely in the exports of Manchuria, coal is still being imported, and for the coming winter contracts, in many instances, are now being made with dealers outside of Manchuria.

The prevailing high price of coal is not encouraging to manufacturing enterprises in southern Manchuria. The fuel item is of prime importance in the operation of machinery in Manchuria, and fuel-saving devices are in demand. An enterprising Chinese captain of industry, who recently established a cotton-cloth weaving plant at Newchwang, has closed the mill owing to the high cost of coal and other unsatisfactory conditions.

A branch of the Japanese railway lines of southern Manchuria connects with the Fushan mines, and with the railway transportation problem fully adjusted a very heavy tonnage can be handled from this and other mines in the vicinity of Liaoyang at a very low initial expenditure. Cheap fuel, which can not be had under primitive methods of native cart transportation, will prove encouraging to various industrial enterprises in Manchuria.

FINE PROSPECTS FOR COMMERCE.

By October 1 the Japanese anticipate establishing through railway service from Newchwang, Port Arthur, and Dalny, and way points to Kuan Cheng Tze, from which point Harbin and the Trans-Siberian Railway may be reached by the Russian railway lines. The Harbin business men desire commercial and industrial activity. Antebellum conditions at Harbin afford numerous commercial advantages, particularly to fortunate Russian and Chinese interests. With passenger and freight transportation on the railway lines thus reestablished, and native cart and river junk traffic unrestricted, following the withdrawal of military restraints, together with the open-door policy prevailing at all of the principal cities in Manchuria, the total volume of trade in 1907 should be considerably larger than heretofore recorded in the exceptionally rapid commercial development of the past ten years.

With continued good crops and many millions of ready cash left by the Japanese and Russian armies still unexpended, with unprecedented prices being paid for the chief export products of the country—that of beans, bean cake, and bean oil—Manchuria's purchasing power is apparently as great as when the Russian Government was spending millions of rubles among the natives in the construction and extension of the Trans-Siberian Railway in northern Manchuria and the Chinese Eastern Railway to Newchwang, Port Arthur, and Dalny in southern Manchuria.

FREE ENTRY STILL UNSETTLED.

With Chinese customs facilities at Antung not yet operative (August, 1906), and with the usual maritime customs duties being collected only at the port of Newchwang—thus leaving all other possible entrances to Manchuria available for the free entry of the goods of all nations—business conditions are still somewhat unsettled. A number of Chinese firms who deserted the Newchwang market for Vladivostok early in 1906 because of the advantage of free entry of goods at the latter port are now renewing their former business connections. The reason given is that customs duties similar to those charged at all Chinese ports are to be levied at Vladivostok. The announced intention of Japan to allow the free entry of goods via Dalny (Tairen) until such time as China arranges for the collection of the usual duties on goods entering Manchuria via Russia (August, 1906) adds to the disquieting and unsettled nature of trade conditions. Following the complete withdrawal of all phases of military occupation and the collection of customs duties, with perfect equality to all nations, a normal condition of trade will, it is anticipated, prevail throughout the interior.

CHINA ABOLISHES OPIUM.

China has again decreed the abolition of the culture of the opium poppy and the use of opium or its products in any of its forms, save medicinal. This action, which comes in the shape of an imperial edict, was the direct result of the report of the Chinese commission appointed to visit this country and Europe, and the edict is signed by the heads of both civil and military affairs. This is not the first attempt of China to free herself from the effects of the opium trade. The first effort was made in 1839. That result led to a war with Great Britain, which profited by the export of opium to China, and as a result of the war the edict was recalled and China had to pay an indemnity of about \$6,000,000. The Chinese commission which visited England last year found public sentiment far different from what it was three-quarters of a century ago. Hence the issue of this second edict, the abolition of the opium trade, both in the way of home products and imports.

ISSUE OF PAPER CURRENCY.

Mr. Luke E. Wright, ambassador to Japan, has furnished the Department of State with a translation of an imperial ordinance relating to the issuance of bank notes in the province of Kwantung and China by the Yokohama Specie Bank. The notes are subject to supervision by the minister of finance and the minister of foreign affairs and are redeemable in silver. The bank is required to maintain a reserve for reduction of its notes equal to the amount issued. The notes have full legal-tender quality and the charter gives the bank the privilege of issuing sight notes at its branches at Newchwang, Tientsin, and Shanghai.

JAPAN.

PORT OF KOBÉ.

COMMERCIAL IMPORTANCE OF ACTIVE COAST CITY.

Consul Hunter Sharp, of Kobé, in his annual report for the year 1905, furnishes a large amount of vitally interesting material. He writes:

The foreign trade of Kobé for 1905 amounted to \$155,910,136, an increase of \$25,020,790 over 1904; that of Osaka, \$37,070,144, an increase of \$13,292,209, and of the subports, \$6,029,548, an increase of \$1,788,534, making a total for the district of \$199,009,888, or 49.33 per cent of the total trade of the Empire, an increase of 25.23 per cent over 1904. The imports into Kobé amounted to \$113,849,774, the exports therefrom to \$42,060,422; Osaka imported goods worth \$9,212,916 and exported goods valued at \$27,857,228; subports imported goods valued at \$5,434,913 and exported goods valued at \$594,635.

The United States shares more largely in the trade of Kobé than does any other country by \$2,304,986, the aggregate amounting to \$32,804,045. China followed the United States with \$30,499,059; British India, \$29,813,489; Great Britain, \$24,971,737, and Germany, \$10,429,708. The imports from the United States show an increase of \$11,436,221 over 1904, and the exports thither a decrease of \$133,177. Great Britain's increase in imports amounted to \$9,341,326; British India's, \$8,222,306, and Germany's, \$3,274,455.

LARGE INCREASE IN COTTON IMPORTS.

The imports of ginned cotton amounted to \$43,747,351, an increase of \$13,384,013 over 1904. The United States share of this trade was \$12,804,658, an increase of \$9,024,085 over 1904. Seed cotton decreased from \$869,843 to \$623,613 in 1905, none of which came from the United States. Kerosene showed a great falling off, the figures being \$3,436,769 in 1904 and \$1,686,912 in 1905. The shipments from the United States amounted to \$2,474,944 in 1904 against \$971,583 in 1905, a decrease of \$1,503,361, or practically all the loss in this importation. Machinery showed an increase from \$1,926,464 to \$5,679,397, the shipments from the United States being \$2,469,146, a gain of \$1,895,016, being greater than those of any other country.

Wheat increased from \$177,148 to \$658,329 and flour from \$1,432,039 to \$1,934,802. The United States supplies practically all the flour and more than one-half of the wheat. The demand for various kinds of fertilizers has steadily increased of late years. The imports of oil cake increased in 1905, \$1,399,249, of which China supplied \$1,216,354. The imports of ammonium sulphate also increased \$706,013, to which Great Britain contributed \$660,769, while the increase in nitrate of soda, oil cake, phosphate, etc., from the United States aggregated \$358,963. In cotton goods the total imports amounted to \$4,264,236, of which Great Britain furnished \$3,925,693 and the United States only \$57,820. The value of wool and woollen goods was \$4,097,273. Of these the United States furnished nothing. The receipts of mousselines de laines amounted to \$1,173,291, an increase of \$486,265 over 1905.

FLUCTUATIONS IN SUGAR.

Sugar showed a marked falling off in the volume of imports as well as a decline in price. The increase of the "consumption tax" at the beginning of the year, rumors of a Government sugar monopoly, and the prospect of further increase of the already heavy import duty on sugar had a very unsettling influence on the market, leading to speculation destined to end disastrously when prices did not advance as expected. It is noteworthy that refined sugar should still meet with sales in spite of the "consumption tax" and import duty, which together amount to from 125 to 130 per cent on the c. i. f. cost. Germany supplied the bulk of refined beet sugar, shipping 465 tons, valued at \$30,077.

The increase in the importation of paper was \$825,212 over 1904, Germany, Austria, Belgium, and Great Britain supplying nearly the whole amount in the order named, the United States only sharing in the total of \$1,431,345 to the extent of \$82,036, seven-eighths of which was for printing paper. Rice showed a decrease of \$5,423,622 from the imports of 1904. The increase in leather amounted to \$1,027,973, of which the United States furnished \$797,978.

EFFECTS OF THE TOBACCO MONOPOLY.

Since the "tobacco monopoly law" went into effect July 1, 1904, the importation of tobacco is practically limited to the Imperial Japanese Government. Under this law individuals are only permitted to import tobacco for personal consumption, after first obtaining permission of the tobacco monopoly bureau, and as there is an exorbitant duty of 250 per cent ad valorem, few people care to avail themselves of this privilege. On April 1, 1905, the cut tobacco monopoly came into effect, the Government acquiring full control of the tobacco industry, both as regards its growth and manufacture. The importation into Kobe of tobacco leaf for 1905 shows a very small increase over that of 1904, the figures being \$454,254 and \$434,571, respectively, the United States supplying more than 99 per cent of the total.

The exports of cotton yarns amounted to \$10,880,044 against \$10,465,989 for 1904. A marked decrease is shown in the export of tea, the quantity being 10,266,000 pounds against 15,600,000 pounds in 1904. The increase in the cost of labor and of commodities of all kinds has made Japanese tea more costly, and thereby enabled other teas to compete more favorably. The total exportation of matting amounted to \$2,470,567, of which the United States took \$2,329,459. The abundant crop of straw braid in 1905, in conjunction with fairly large stocks abroad, resulted in a steady decline in prices and a smaller export, \$1,897,253, which was a falling off of \$660,044 from 1904. The manufacture of porcelain and earthenware is one of Japan's chief industries. The increase in the amount exported from Kobe in 1905 was \$533,662 out of a total exportation of \$1,927,294, the United States taking 90 per cent of the increase.

TRADE-DEVELOPING METHODS.

PART TO BE PLAYED BY AMERICA IN THE EAST.

Consul-General H. B. Miller, of Yokohama, suggests methods that must be followed by American merchants and manufacturers if they are to have any very great share of the far eastern trade.

The Japanese people enter into most minute and accurate examination of machinery, appliances, and merchandise generally. This universal characteristic, together with experience, indicates clearly the importance of sending expert representatives to Japan in order to make a success of securing and holding the trade of this country. These people have a way of asking questions and of wanting information that only experts can answer, and persons unable to furnish satisfactory explanations to their questions will not be able to secure or retain their trade. It is a great mistake to look upon the Japanese as a nation of imitators. Their most important quality of mind is adaptation. They are students of applied industry, and things they purchase must be adapted to their wants, to the habits and characteristics of their people, while of the best modern style.

Another important fact to be borne in mind by merchants and manufacturers wanting business in Japan is that Japanese industrial life is expanding in a great variety of lines, and close attention to this development is necessary to secure a share in this expanding and newly developing trade. This requires active and alert local representatives. Americans are meeting with much success in the trade of Japan, and my investigations convince me that this success is due to local representation, supported by expert agents, being provided as required. Representatives of other countries are realizing this American advantage and are advising their countrymen to follow it.

NEW ADJUSTMENT OF TRADE.

Japan is endeavoring to expand into a manufacturing country. The Government, by general legislation, by its tariff, its subsidies, its banking capital, and the use of its national credit to borrow money at a low rate of interest and reloaning to manufacturers and commercial people by its scientific and commercial experts, seems determined to make Japan a great manufacturing country for oriental markets. One of the greatest generals of industry in the United States said to me, recently, "The highway of American commerce to the Orient leads through Japan." While this statement should not be taken as applicable to every form of oriental trade, still I am convinced that in general it will hold good; hence merchants and manufacturers will profit by examining the trade of the Orient from this point of view.

In many lines American manufacturers will do well to have the cruder and coarser parts of their machinery manufactured in Japan. A study of the tariff and advantages offered by the Japanese Government will show this advice to be based upon a consideration of a part of a national policy. I would especially advise American manufacturers to make a careful investigation of the conditions that cause this opinion to be expressed.

There is much more to be gained by working in harmony with Japan for the trade of the Orient than by inaugurating a policy of stubborn opposition and blind competition.

PACKING AND INSPECTION.

Concerning packing, shipping, and alteration of products to suit this trade, it is useless to repeat the advice so often given by consuls, for each line has its own competition to meet, and all of these things are made effective only through the eyes of interested representatives. I desire to emphasize, however, the importance of sending special representatives to carefully study all of these problems on the ground

and to urge upon the home houses to heed the advice and instructions of such representatives. In many lines the trade of the Orient is going to be sufficient to justify extensive preparations and special provisions to secure and hold it. It is the ability to know and to provide for what is wanted that makes the local representatives effective. Manufacturers should understand that in this market they are competing with Great Britain, France, Germany, Belgium, and many other countries, most of which are anxious and willing to alter, pack, and in every way provide for the special requirements of this market.

GOVERNMENT INVESTIGATION.

Another important feature for our merchants and manufacturers to note is the fact that the Japanese Government constantly gives scientific assistance to its merchants and manufacturers; hence successful deception in the character or quality of goods can not be carried out. The analysis of flour, for instance, is provided for by the Government. The representative here of an important flour-importing firm learned for the first time the fact that his firm had materially altered the quality of a certain brand of flour by a Government report upon it.

To emphasize the important requirements for meeting the growing trade of the Orient I repeat them:

First, local representatives; second, expert supervision and assistance; third, meeting the requirements by making special arrangements for the trade, and, fourth, transferring, if necessary, a portion of the manufacturing to China or Japan.

GENERAL PROGRESS.

REMARKABLE ACTIVITY IN INDUSTRIAL LINES.

Consul-General Miller, reporting on Japan's trade for the first six months of 1906, furnishes many facts and much advice which should be given consideration by our business men. He writes:

The figures for Japan's foreign trade during the first six months of the current year show a total of \$199,860,138, against \$214,615,407 during the corresponding period of 1905, a reduction of \$14,755,269. The signal falling off is in imports. These aggregated \$143,231,430 in 1905 and only \$111,524,780 in the current year, a decrease of \$31,701,650. On the other hand, exports increased from \$71,383,976 in 1905 to \$88,335,359 in 1906, an increase of \$16,951,383. Doubtless this result will be welcomed by Japanese economists, since the unfavorable balance of trade, which was \$71,847,954 in the first six months of 1905, fell during the corresponding period of the current year to \$23,189,421. It is probable that the three months of July, August, and September will see heavy importations in anticipation of the new statutory tariff's operation, but on the whole the excess of imports will probably not be greater than it was in 1904.

INCOME FROM IMPORTS.

The customs duties collected during the period under review were \$9,898,619, against \$8,780,928 in 1905, and \$4,841,234 in 1904. Thus, in two years the Treasury's semiannual revenue from this source has been more than doubled, owing to the operation of the last revision of the statutory tariff. The Treasury claims that the increased scale of duties, which is to go into operation from the 1st of October, is

imposed solely for revenue and not for protective purposes. If we look back to the year 1895, the year after the conclusion of the revised treaty with Great Britain, and observe that the customs duties then brought to the Treasury a revenue of only \$3,342,291, whereas the revenue this year will probably be in the neighborhood of \$25,000,000, we obtain a striking example of the financial benefit Japan has derived from the new régime. Her income from customs dues alone will soon suffice to pay the interest of her whole foreign debt, greatly as the war increased it.

EXPORTS AND IMPORTS.

The growth of the export trade has been spread with tolerable uniformity over all the principal staples. The groups that exhibit the most marked increases are beverages and comestibles \$2,000,000, in round numbers; metals and metal manufactures \$2,250,000; tissues, yarns, thread, and their raw materials \$5,500,000, and miscellaneous \$5,500,000. The other increases are small but healthy and the decreases are few and insignificant.

In imports the net diminution, amounting to \$31,706,650, is spread over the whole range of staples with a very few exceptions. The various reductions, omitting small fractions, are: Arms, ammunition, tools, machinery, etc., \$2,000,000; beverages and comestibles, \$750,000; drugs and chemicals, \$750,000; glass and its manufactures, \$500,000; grain and seeds, \$11,500,000, of which nearly \$10,500,000 was rice; horns, ivory, skins, etc., \$3,500,000; metal and metal manufactures, \$4,500,000; oil and wax, \$700,000; tissues, yarns, threads, etc., \$9,125,000; miscellaneous, \$2,250,000. The only staples that show appreciable increase are paper and stationery \$1,000,000, and sugar \$1,750,000.

DEVELOPMENT OF NATIVE INDUSTRIES.

The most marked features of Japanese life since the close of the war has been in the organization and development of various industries. Heretofore the industrial expansion of Japan has been seriously retarded by lack of capital and high rates of interest. One of the strangest features of Japan's life is the fact that the entire country emerges from a great war with an enormous debt and a serious burden of taxes, but at the same time a wonderful improvement in her national, commercial, and industrial credit. From all quarters of the world capital seems anxious to enter Japan. Taking advantage of this condition, the Japanese nation and people are borrowing in great quantities for this industrial development at rate of interest lower than ever before anticipated. As the money market became easy and foreign capital began looking over the situation for investment, there followed the greatest commercial activity the country ever knew. Organizations are forming every day, and great commercial enterprises are being launched. From the close of hostilities to the 1st day of June a total of 314 new and enlarged old enterprises have been organized, with a total aggregate capital of \$197,151,514 gold.

ORGANIZATION OF NEW ENTERPRISES.

The greatest activity is noted in the organization of new electrical works. Japan has a wonderful amount of water power, and this is rapidly being utilized for electrical purposes. No less than 51 new

companies have been organized, with an aggregate capital stock of \$55,000,000 gold.

About \$20,000,000 gold represents the capital stock of 10 new navigation and dock companies. There have been formed 5 new insurance companies, with a capital stock of \$7,250,000 gold. An aggregate of \$34,000,000 gold represents the capital stock of 11 reorganizations of old companies along broader lines.

The capital stock of reorganized and new banks aggregates \$11,000,000. Eleven new steam railroad companies have been formed, with an aggregate capital stock of nearly \$10,000,000 gold. There have been 14 new mining companies formed, with a capital stock of nearly \$13,000,000 gold.

There have been 22 new silk and cotton mills projected, with a capital stock of \$6,500,000 gold. Special attention seems to have been directed to the formation of new weaving companies, and a total of 19 new companies are making ready to start business, with a capital stock of \$3,000,000 gold.

The greatest activity in the formation of new companies seems to have centered at Tokyo, the capital of the Empire, which has a record of 62 new organizations, with a subscribed capital stock of \$84,132,500 gold.

Osaka ranks second with 68 new companies and enlarged old ones with an aggregate capital stock of \$23,897,075 gold.

Kobe has 26 new enterprises, commanding a capital stock of \$19,406,200 gold, while Nagoya has given birth since the war closed to 21 new organizations, with a total capitalization of \$4,099,200 gold.

Even Korea has been visited with Japanese commercial activity, and the record shows 5 new organizations and the enlargement of 2 others. The capital stock of 3 of the new companies is unknown, and \$275,000 gold represents the capitalization of the others.

ACTIVITY IN CEMENT.

PROGRESS IN PRODUCTION AUGURS KEEN COMPETITION.

Consul-General Miller also reports the progress of the Japanese in the production of cement. He predicts the opening of an era of expansion in this line, basing his belief on the lively demand that he feels sure is to come from Korea, Manchuria, parts of Russia, and other eastern countries: He writes:

Nine years ago Japan's exports of cement amounted only to \$8,000 in value, but in 1903 it had increased to \$295,000. The war temporarily checked the growth of the industry, the restoration of peace revived it. Not only is the demand for Japanese cement springing up in Korea and Manchuria, but large orders received from San Francisco, brought about by the recent catastrophe, gave a great impetus to it. All the stock in the market has been cleared and the manufacturers are busily engaged in trying to meet requirements. The amount exported in 1896 was 3,096,858 pounds, valued at \$12,686; in 1905, 42,149,249, valued at \$197,696.

Up to the end of May this year the value of cement exported had reached over \$211,500, while the figures for the corresponding period of the two preceding years were \$99,000 and \$108,500, respectively.

That is to say, the quantity exported during the first five months of this year exceeded that for the whole of last year. The principal countries to which cement was exported during the whole of 1905 and the first four months of this year are as follows, the figures representing tons of 2,000 pounds:

Country.	1905.	1906.	Country.	1905.	1906.
Korea	8,954	3,215	Philippines	2,589	200
America	199	4,952	Hongkong	678	60
China	3,194	1,528	Straits Settlements	40	37
Manchuria		1,155	Australia	19	19
Dutch India	212	327	Canada	5,171	.....
Russia		252	Others	66	44

The capital invested amounts to something like two and a half million dollars. Only one company declared a 10 per cent dividend last year; most of the companies had to be satisfied with 5 per cent or less. Hitherto the situation looked a bit black. A new stage of development seems to have opened up.

NAGASAKI'S INCREASING EXPORTS.

IMPORTS DECREASE—MOJI MAKES A BETTER SHOWING FOR IMPORTS.

Consul C. B. Harris, of Nagasaki, regards the conditions in Nagasaki as encouraging to the Japanese. Those, too, of Moji, consular agency of Nagasaki, are satisfactory, both imports and exports having increased. The Japanese seem to be economizing so far as imported goods are concerned. Mr. Harris reports:

The value of the total foreign trade of the Nagasaki consular district during the six months ended June 30, 1906, was \$19,681,537, an increase of \$641,625 over the figures for the corresponding six months of 1905. The imports amounted to \$10,119,825, a decrease of \$2,392,768, while the exports rose from \$6,527,919 to \$9,561,712, an increase of \$3,033,793, or an advance of nearly 50 per cent.

The trade of Nagasaki for the first six months of 1906 amounted to \$7,975,415, a decrease of \$3,185,213 compared with the same period of 1905. The decrease was in imports, which declined from \$7,154,827 to \$3,353,300, due largely to the smaller purchases of coal, rice, and kerosene. The imports of coal fell from \$2,708,305 for the first six months of 1905 to nothing for the same period in 1906. Kerosene declined from \$1,086,988 to \$512,303, and rice fell from \$533,781 to \$192,061. In imports Great Britain leads, with \$988,225. China comes next, with \$911,566, followed by the United States, with \$745,741. The imports from Great Britain included \$178,468 worth of machinery and \$578,099 worth of iron and steel products. The most important imports into Nagasaki from the United States during the first six months of 1906 were: Kerosene, \$441,410; wheat, \$58,840; nails, \$42,161; machinery, \$37,373; wheat flour, \$36,966; paraffin wax, \$34,179; lumber, \$21,821; and condensed milk, \$20,951.

The exports from Nagasaki advanced from \$820,588 for the first six months of 1905 to \$1,436,902 for the corresponding period of 1906.

The exports of rice increased from \$8,329 to \$83,214, and tea advanced from \$16,954 to \$82,130. The exports to China were the largest, being \$734,367; Asiatic Russia was second, with \$357,095, and Hongkong third, with \$148,080. The exports to the United States were valued at \$4,575, and those to the Philippines, \$29,299.

PORT OF MOJI.

The foreign trade of Moji for the first six months of 1906 amounted to \$10,448,228, against \$8,228,080 for the corresponding period of 1905, of which the imports increased from \$4,753,664 to \$5,926,637, and the exports advanced from \$3,474,416 to \$4,521,591. The leading imports were raw cotton, valued at \$2,123,876, an increase of more than \$500,000 over the corresponding months of 1905; sugar, valued at \$1,014,292; oil cake, \$798,104, and machinery, \$632,905. British India leads in the amount of imports for the period under review, with \$1,583,452; China comes next, with \$1,245,193; the United States third, with \$886,403; and Great Britain fourth, with \$728,072. The leading articles imported from the United States were: Raw cotton, valued at \$363,532; wheat flour, worth \$245,343; kerosene oil, worth \$158,279; and machinery, valued at \$78,078.

More than two-thirds of the export trade of Moji goes to China. This amounted to \$3,144,666 for the first six months of 1906. Hongkong's purchases amounted to \$811,258 and those of Korea were valued at \$315,650. The exports to the United States during the same period amounted to \$122,518.

The total trade of the remaining ten ports in the district amounted to \$4,443,107, of which \$839,988 were imports and \$3,603,219 exports.

PORT OF TSURUGA.

GROWING IMPORTANCE OF A NEW SHIPPING POINT.

Consul Hunter Sharp writes from Kobe that much interest has been shown of late in the development of the port of Tsuruga, on the west coast of Japan. He says:

Tsuruga port is one of the subports of Osaka, distant by rail about 113 miles from Kobe, and is geographically better situated than any other port in Japan to be the distributing center of the trade with Siberia, as it affords the most direct line of communication between both the Yokohama and Kobe districts with Vladivostok. At present it is connected by a branch line of 30 miles with the main Government Railway at Maibara, but if this port is to continue its development better railway connections are absolutely necessary. A direct line from Tokyo to Tsuruga would reduce the distance by one-half, and would also open up the provinces of Shinano and Mino, the development of which has been hitherto retarded by lack of transit facilities.

Tsuruga is situated on Wakasa Bay and has a depth of water of from 11 to 15 fathoms inside the harbor limits. It is about 500 miles south of Vladivostok, with which it is connected at present by two lines of steamers, one Russian and one Japanese. The Russian East Asia Steamship Company has a weekly service, making the voyage in thirty-eight hours, about ten hours less than the Japanese line, and they are now contemplating a biweekly one to connect with the

express trains to Europe. The trade from Tsuruga to Vladivostok consists chiefly of fruit and vegetables, and since the opening of this route has largely increased in volume, thereby helping the farming industry in the adjoining provinces.

INDUSTRIES PROMOTED.

NEW FLOUR MILLS PROJECTED—EXTENSION OF OLD MILLS.

Consul Hunter Sharp, of Kobe, finds that the new customs tariff of Japan, which went into force on October 1, has stimulated the promotion of companies for the manufacture of flour.

The import duty on flour was increased from \$0.596 to \$0.722 per 100 kin (132.277 pounds), and that on wheat from \$0.267 to \$0.284 per 100 kin (132.277 pounds). Among the companies which are now in course of formation are the Nippon Flour Company of Tokyo, which is reported to have decided to increase its capital from \$150,000 to \$500,000 and to establish mills at Kobe, which will produce 2,000 bags of flour per day; the Imperial Flour Manufacturing Company, capital \$250,000, all subscribed, will build a mill at Kobe and export its product to Korea and Manchuria; the Nippon rice mill of Kobe proposes to add a flour mill; also several well-known Japanese capitalists are forming a company to manufacture flour at Hiogo, the western part of Kobe. The machinery for these enterprises will have to be imported, most probably from the United States. Another enterprise is the Masudaya flour mill, of Yokohama, which is erecting a mill at Hiogo, with a capacity of 500 barrels a day. The capital is about \$75,000. The machinery is now arriving, and the mill will be in operation in six months.

NEW ELECTRIC RAILWAYS PROPOSED.

The Japanese Government has sanctioned under a 99-year concession the construction of an electric railway between Osaka and Kyoto, stipulating 60-pound rails outside and 70 within the city limits. The distance is 30 miles, and the authorized capital will be \$3,500,000. The Kobe City Electric Railway has been approved by the Government with a capital of \$3,000,000. The 18 miles will be built in two installments. It is expected that a charter will soon be granted by the Government for the construction of a 13-mile electric railway between Kobe and Akashi, costing about \$1,000,000. Work on the Nankai Electric line between Osaka and Hamadera—4 miles—will soon commence, and an extension to Wakayama is being considered, all estimated to cost \$1,000,000.

The cars for these lines will most likely be made in Nagoya, as were those for the Hanshin line between Kobe and Osaka, by the Nippon Sharyo Seizo Kaisha, from a sample car imported from the United States, while the electric motors and rails will be imported. Besides the above there are a number of other short electric railways in contemplation.

EUROPE.

REPUBLIC OF FRANCE.

COMMERCE AND INDUSTRIES PROGRESSIVE.

UNITED STATES SUPPLIES RAW MATERIALS AND BUYS ARTICLES OF LUXURY.

Consul-General Frank H. Mason, of Paris, submits the following report of the foreign commerce and principal industries of France for the calendar year 1905, detailed amounts being in francs (franc=19.3 cents):

Imports from all countries.	1904.	1905.
	<i>Francs.</i>	<i>Francs.</i>
Food products	817,218,000	800,335,000
Raw materials	2,853,035,000	3,026,224,000
Manufactured goods.....	832,000,000	847,354,000
Total.....	4,502,253,000	4,673,863,000
Equivalent in American currency.....	\$868,936,829	\$902,055,559

Net increase of imports in 1905, \$38,118,730.

Exports to all countries.	1904.	1905.
	<i>Francs.</i>	<i>Francs.</i>
Food products.....	693,261,000	778,262,000
Raw materials.....	1,220,872,000	1,261,483,000
Manufactured goods.....	2,220,212,000	2,379,000,000
By parcels post	316,611,000	342,889,000
Total.....	4,450,956,000	4,761,634,000
Equivalent in American currency.....	\$859,034,508	\$918,995,362

Net increase of exports in 1905, \$59,960,854.

The duties collected on the foregoing imports amounted to \$66,997,785 in 1904 and to \$79,800,675 in 1905, respectively.

GEOGRAPHY OF FRENCH FOREIGN COMMERCE.

In respect to the origin of imports into and the destination of exports from France in 1905 the records of the official bureau of French statistics show the following interesting comparison, it being understood that import duties being specific the values of merchandise are estimated on the basis of average rather than actual market prices.

Imports from—	1905.	Exports to—	1905.
Great Britain	100	Great Britain.....	<i>France.</i> 1,213,023,000
United States	100	Belgium.....	741,071,000
Germany	100	Germany.....	628,300,000
Belgium	100	Algiers.....	327,016,000
Russia	100	Switzerland.....	297,881,000
Argentina	100	United States	286,946,000
Algeria	100	Italy	208,540,000
Spain	100	Spain.....	116,758,000
Italy	100	Argentina.....	88,785,000
Switzerland.....	100	Russia.....	52,078,000
Brazil.....	100	Turkey.....	51,436,000
Turkey.....	100	Brazil.....	44,094,000
Austria-Hungary.....	100	Austria-Hungary.....	30,454,000
All other countries.....	1 100	All other countries.....	680,252,000
Total.....	4,673,863,000	Total.....	4,761,634,000
United States equivalent	\$902,655,559	United States equivalent....	\$918,995,362

It thus appears that the import and export trades of France are nearly balanced, that both are increasing, and that in respect to both imports and exports Great Britain is the leading commercial trader with France.

TRADE WITH THE UNITED STATES.

The same official records reveal the following detailed exhibits of French imports from and exports to the United States during the past two years ending December 31, 1905, showing the increase or decrease in each case:

Imports from United States.

Merchandise.	1904.	1905.	Merchandise.	1904.	1905.
	<i>France.</i>	<i>France.</i>		<i>France.</i>	<i>France.</i>
Cotton, raw.....	238,923,000	286,436,000	Feathers for ornament..	2,637,000	1,761,000
Naphtha and schiste oils.....	26,658,000	33,636,000	Tools and hardware....	2,384,000	2,545,000
Tobacco, leaves and stems.....	18,025,000	21,098,000	Furniture and wood-work.....	1,907,000	1,776,000
Grease, fats of all kinds (except of fish).....	6,949,000	10,774,000	Hides, dressed.....	1,823,000	4,086,000
Copper, pure (first fusion).....	58,692,000	52,056,000	Chemical products.....	995,000	1,278,000
Coffee.....	1,176,000	1,181,000	Bran.....	523,000	269,000
Wood, common.....	20,926,000	20,261,000	India rubber and gutta-percha, crude.....	1,787,000	1,733,000
Breadstuffs (grain and flour).....	2,668,000	12,826,000	Medicinal roots, herbs, etc.....	444,000	700,000
Machines and machinery.....	33,844,000	34,828,000	Oil cake.....	2,142,000	3,533,000
Meats, fresh, salted, and canned.....	2,407,000	2,682,000	Apples for cider.....	1,650,000	337,000
Cotton-seed oil.....	11,843,000	22,387,000	Seeds for sowing, including lucerne and clover.....	225,000	159,000
Hides and skins, raw.....	4,002,000	2,451,000	India rubber goods.....	786,000	620,000
Lobsters, canned.....	32,000	27,000	Lead.....	826,000	125,000
Oils, heavy, and residue of petroleum.....	3,208,000	5,228,000	Coal.....	14,000	110,000
Cattle.....	94,000	72,000	Other articles.....	34,367,000	28,184,000
Whalebone, crude.....	927,000	1,668,000			
			Total.....	482,782,000	554,594,000
			United States equivalent.....	\$93,176,926	\$107,053,132

Increase in 1905 over 1904, \$13,376,206.

Exports to United States.

Merchandise.	1904.	1905.	Merchandise.	1904.	1905.
	<i>Francs.</i>	<i>Francs.</i>		<i>Francs.</i>	<i>Francs.</i>
Silk goods	60,260,000	40,813,000	Vegetables, fresh, salted, and preserved ..	1,023,000	880,000
Woolen goods	16,415,000	13,771,000	Wool, unmanufactured ..	2,423,000	1,347,000
Gloves	9,366,000	11,260,000	Tools and hardware	1,656,000	1,508,000
Hides and skins, raw...	10,794,000	19,715,000	Clocks and watches	588,000	539,000
Feathers for ornament ..	3,639,000	5,328,000	Linen, hemp, and ra- mie goods	231,000	288,000
Automobiles	2,621,000	6,647,000	Oils and essences	6,141,000	7,794,000
Toys, opera glasses, fans, brushes, etc	7,778,000	7,814,000	Musical instruments ...	515,000	414,000
Cotton goods	42,522,000	56,447,000	Hair of all kinds	1,614,000	1,495,000
Clothing	7,913,000	11,527,000	Fruits, table	2,278,000	1,532,000
Artificial flowers and millinery	5,358,000	7,350,000	Furniture and wood work	715,000	902,000
Leather goods	3,493,000	4,012,000	India rubber and gutta- percha, crude	2,814,000	7,639,000
Tartar, crude	4,626,000	6,756,000	Perfumery	1,699,000	1,536,000
Crockery and glassware ..	6,168,000	5,674,000	Glycerin	3,783,000	3,920,000
Objects for collections..	2,524,000	2,340,000	Plants and shrubs	459,000	545,000
Hides, dressed	1,615,000	1,492,000	Millstones	653,000	533,000
Wines	8,168,000	8,405,000	Other articles	23,531,000	32,672,000
Paper, cardboard, books, and engrav- ings	1,960,000	2,336,000			
Fish, pickled or in oil..	4,451,000	4,074,000	Total	250,747,000	286,946,000
Silk, raw, and waste silk	923,000	7,611,000	United States equivalent	\$48,394,171	\$55,380,578

Increase in 1905 over 1904, \$6,986,407.

Among the more striking facts which are embodied in these tables are, first, that American exports to France are almost wholly in the nature of raw materials, while French exports to our country belong overwhelmingly to the categories in which highly skilled labor and trained artistic taste form a large element in the cost of production. Thus the French imports of raw American cotton alone formed more than half the whole sum of all importations from our country in 1905, and equaled almost exactly in value the whole bulk of French exports to the United States during the same year.

AMERICAN MACHINERY—FRENCH SILK EXPORTS DECLINE.

About the only raw materials that we import from France are hides, skins, crude rubber, and tartar, while we supply to French manufacturers not only the bulk of their cotton, but copper, tobacco, oils, and lumber. The only part of the field in which our manufacturers play any important rôle is in the department of machinery, in which the acknowledged prominence of the leading American makers enables them to hold their own.

The most notable falling off in any article of French exports to the United States during the past year was the drop from 60,260,000 to 40,813,000 francs in manufactures of silk, an item which belongs essentially to the class of luxuries, and fluctuates in quantity in close relation with the prevailing conditions of prosperity in the United States. There was, in 1905, no decrease in general prosperity which would explain the falling off in silk imports, nor could this be attributed to any change in fashion which put silk goods temporarily out of demand. It must therefore be assumed that the diminished silk imports from France were due to the steady expansion of silk manufactures in the United States and their growing capacity to supply the home demand.

AGRICULTURAL RECORD OF THE YEAR.

The year 1905 was one of average agricultural prosperity in France, and the four leading crops, wine, wheat, sugar, and cider, left, respectively, the following records, as compared with those of the immediately preceding year:

The vintage of the year yielded 56,666,000 hectoliters (1,501,649,000 gallons) of wine, a falling off of 9,351,000 hectoliters (247,801,504 gallons) from the yield of 1904. This, however, did not affect unfavorably the exports of wine, which increased in value from 210,128,000 francs in 1904 to 278,500,000 francs in 1905, the highest export of any year since 1889.

The wheat crop yielded 92,078,847 metric quintals (338,389,763 bushels), an increase of 10,529,500 metric quintals over the harvest of the previous year. To fill the small deficit thus left and to meet the requirements of consumption, there was imported 1,825,899 metric quintals (6,694,963 bushels) of wheat during the year.

The record of the beet sugar campaign of 1904-5 in France shows that the crop of beets gathered reached a total of 4,669,455 metric tons, a falling off of not less than 1,835,593 tons compared with the record of the preceding year. The average price received by French farmers in 1904-5 for their beets was 22.23 francs (\$4.30) per metric ton, and the average yield of sugar per ton of beets was 120.50 kilograms (253.7 pounds), or 11.42 per cent, a percentage which has never before been attained in France except during the campaign of 1898-99, when it reached 120.85 kilograms per ton of beets. The total number of sugar factories in operation during 1905 was 270, and the total product 562,736 tons of sugar.

The total consumption of coal during the year was 48,000,000 tons, of which 36,048,264 tons were derived from French mines and 12,546,020 tons imported, mainly from Belgium and Great Britain. A detailed report, showing the qualities and prices of native and imported coals, and pointing out the opportunity which France offers for the development of an import trade in coal from the United States, was made from this consulate in February and published in *Daily Consular and Trade Reports* on March 6, 1906.

TARIFF SYSTEM.

Prior to 1892 the French fiscal policy was that of a tariff for revenue, combined with long-term treaties of commerce with most of the leading commercial nations of both hemispheres. Under this system there was a large annual excess of imports over exports, and, when French farmers found themselves unable to longer compete successfully with the grain and meats of newer and more fertile countries, and when manufactured goods from Great Britain, Germany, and the United States began to make a serious invasion into French markets, the Government adopted a new tariff schedule that was frankly protective.

In the domain of manufacture France was handicapped by a limited coal and iron-ore supply, a lack of cheap and extensive internal water transport for heavy freights, and by the fact that a large proportion of the supplies of cotton, wool, lumber, copper, steel, tin, and other raw materials have to be imported from abroad. The tariff of 1892 embodied two general principles, viz, freedom of entry for practically all raw materials, and, for the better protection of French export

trade, a dual tariff on manufactured imports, with a minimum schedule of duties on merchandise from countries which accorded France the privileges of a most-favored nation, and a maximum, or general high schedule for manufactured goods from countries which imposed maximum duties on imports from France. Changes in the law affecting duties on certain articles or groups of merchandise have been made from time to time as necessity or governmental opinion dictated, and the general tendency in all these modifications of the original law has been in the direction of increased duties.

The efficiency of a fiscal system can be best estimated by its results, and the general opinion of French business men is that the present tariff law has operated on the whole favorably for France. The following comparative tables, in which the records of imports, exports, and balance of trade since 1885 are grouped in periods of seven years, will serve to show concisely the effects of the present protective policy upon foreign trade:

Annual average.	Imports.	Exports.	Deficit.
	<i>Francs.</i>	<i>Francs.</i>	<i>Francs.</i>
Period 1885-1891	4,279,000,000	3,408,000,000	-871,000,000
Period 1892-1898	3,977,000,000	3,380,000,000	-597,000,000
Period 1899-1905	4,565,000,000	4,284,000,000	-281,000,000
Year 1905	4,674,000,000	4,762,000,000	+ 88,000,000

No intelligent economist, of course, estimates the prosperity of a country by a rigid comparison of the values of imports and exports; but the present French tariff was enacted for the avowed purpose of reducing the heavy deficit in exports that prevailed during the years preceding 1891, and since the result has been to convert that deficit into a surplus of exports, while at the same time increasing the total annual bulk and value of imports, the law may be said to have fulfilled its more obvious purposes.

No review of the foreign trade of France, however, can be adequate which fails to take into account the overwhelming influence which is exerted by the vast category of exported merchandise, in which artistic skill, the trained æsthetic taste of a people schooled and practised for generations in the essential principles of art, form a large element of market value.

RESULT OF LUXURIOUS AMERICAN TASTES.

In many lines of manufacture French taste still fixes the standards, against which no mere mechanical facility of wholesale production in other countries can successfully compete. As civilized nations—notably the United States—have grown wealthier, more prosperous, and luxurious there has been a steady increase in the number of people who demand and can pay for articles of luxury and correct taste. The present general prosperity in our country is nowhere more accurately reflected than in the declared exports from the consular district of Paris, which rose in the fiscal year ended June 30, 1906, to a total value of \$52,037,683, an increase of \$11,227,205 over the previous high-water mark of 1905. Even this unprecedented figure does not include the vast quantity of clothing, jewelry, and other articles of taste and luxury which were bought in Paris during the year by the throng of American visitors and carried home without invoice declarations as personal effects.

The full effect of these conditions can only be realized when the comparative statistics of exports and imports of manufactured merchandise alone are taken into account. Thus during the seven years from 1899 to 1905, inclusive, the average annual import of manufactured goods to France was valued at 803,000,000 francs, against exports in the same class valued at 2,273,000,000 francs, an excess of 1,470,000,000 francs in exports, and this surplus was further increased to 1,704,000,000 francs in the foreign trade of 1905.

There is a lesson in all this for the countries which stake their chances for increased and sustained exports solely upon their ability to turn out machine-made merchandise of standardized types in enormous quantities and at a low cost. The time will certainly come, if indeed it has not already arrived, when the manufacturers and educators of our country should consider whether an industrial condition, in which one man's work is to a large degree exactly like another's, is after all the highest and most permanently successful form of industrial development.

It is the skilled handiwork of France, the choice products into which the trained artisan has wrought some of his own individual genius and character, which defies the tariff walls of other countries and makes this Republic, notwithstanding limited natural resources, high taxation, and the burden of military and naval armaments, busy, prosperous, and—except for some apprehensions growing out of discontent of the laboring classes—serenely confident for the future.

BUILDING SUPPLIES.

SOUTHERN REGION PRESENTS SUPERIOR MARKET FOR GOODS.

According to Vice-Consul A. Piatti, the activity in the building industry, already reported from the Nice consulate, continues unabated. Mr. Piatti writes:

This fact is of special interest to our manufacturers, and especially for the reason that the grade of buildings is continually improving and also that there is a disposition which did not exist before to introduce materials of better quality as well as modern improvements hitherto unknown here. As an illustration I may mention that the use of wood and parquet floors was a few years ago confined to a very few luxurious and expensive buildings, whereas to-day they are used to the extent of not less than 30 per cent of all the floors built here. One concern alone, having its factory in the neighborhood of Grenoble, informs me that in the past twelve months they have put down at least 400,000 square yards of wood and parquet floors. These cost, laid down, as follows: Floors of ordinary white pine, 90 cents per square yard; of pitch pine, \$1.40, or if in pieces 20 by 4 inches by $\frac{7}{8}$ inch, and laid in parquet designs, \$1.60; of Burgundy oak, 18 by 3 $\frac{1}{4}$ inches by $\frac{7}{8}$ -inch, parquet, \$2.20, and of Hungarian oak, 16 by 2 $\frac{1}{2}$ inches by 1 inch, parquet, \$2.60 per square yard. Pitch pine is a very favorite wood here, and the price of boards in the rough has advanced 20 cents per square yard in the past six months.

The item of heating is also receiving attention, for despite the apparent thermometrical mildness of the climate the absence of proper heating has resulted in general complaints on the part of visitors, many of whom have not hesitated to say that they had not known what

cold was until they came to Nice. The result has been that many owners are putting in heating plants, and that such are being ordered for the new buildings being constructed or being contracted for. Here again is an industry in which American manufacturers should in all reason have a virtual monopoly of the supply by the force of things, for it must be admitted that no others can compete either in price or excellence. In a previous report this consulate mentioned the case of a heating plant, which had been put in a house here, consisting in a great part of American materials, but which were sent here from Switzerland. It will readily be understood that at this rate heating appliances can not be expected to become popular, or indeed be within the reach of the average buyer.

A MARKET FOR AMERICAN GOODS.

The same conditions exist with regard to building hardware. During the past few years a few specialties in the shape of American locks have come into use, but this does not, in my opinion, represent even a fractional percentage of the field open to such and kindred articles. An active representative on the spot with a series of popular samples, and prepared to sell goods delivered at Nice, could in a very short time be in possession of the market here. If there be a department of manufacture in which the prices and features of the American article would appear to leave no loophole for foreign competition building hardware is the one.

As another instance of this I shall mention the case of an architect who, upon examining with me the catalogue of a firm in America manufacturing doors and windows, said, when we came to the question of prices: "It is not possible. I can not believe it. There must be a mistake." In this instance I had figured out that hard-wood doors would cost here, laid down, less than the most ordinary thin pine doors sold locally.

In a few words, this market is to-day absolutely at the option of our manufacturers, who by proper and, if necessary, concerted effort might secure openings which would result in a trade bound to increase in the years to come. But the French buyer is not the man to study a catalogue not in his language, ascertain the rate of freight and the duty. He is accustomed to buy his merchandise delivered at the harbor or at the station, and to attempt to work out the items of cost of foreign goods appears to him like taking a leap into the unknown and through which he is bound to be the victim.

COMMERCE OF RHEIMS.

VALUABLE RESOURCES AND VARIED INDUSTRIES.

Consul J. Martin Miller writes that the nature of the resources and industries of the Rheims consular district are such that with the inborn passion for thrift and frugality, for which the French industrial classes are noted, they have operated to make it an exceedingly prosperous community with probably less "bunching" of the resources into the hands of the few than is the case in most communities in Europe.

Wool manufacturing, he says, has shown a steady decline for thirty-five years. After the Franco-German war Germany started to manufacture woolen cloth in earnest. Rheims continued with the same old

machinery and stuck too closely to old styles. The ideas of the trade and the consumer had run toward a greater variety in figured goods. Germany, with modern machinery, had studied and met every condition of the trade and placed the manufacture of woolen cloth in the category of a high science, as it has many other industrial lines.

Unskilled labor at Rheims is paid wages that average about 10 per cent higher than in Germany and Belgium. The two large wool-combing establishments in Rheims, which give employment to 1,500 operatives, formerly combed wool almost exclusively for the local weaving establishments, but now fully two-thirds of the output, valued at \$16,500,000 in 1905, is shipped to the cloth factories of Germany and Belgium. Of the 20 woolen-cloth manufacturing establishments that formerly existed in Rheims, two of the largest have been converted into automobile factories, while the other 18, with the exception of 2, are running with small forces, some of them making felts and other specialties.

NO COTTON GOODS PRODUCED—PLENTY OF CHAMPAGNE.

Cotton goods have never been manufactured to any extent in the Rheims consular district. Two of the small factories in knit goods in the vicinity of Troyes suspended operations, owing to the high price of labor. While nearly one-half of the imports into France from the United States is unmanufactured cotton, very little finds a market in this district. The imports from the United States sold in the 47 principal towns of the district consists of machinery, food products, and shoes.

There are 247 manufacturers of champagne in Rheims and vicinity. There are 52 firms exporting champagne to the United States, but 9 of them do nine-tenths of the business. Of the \$24,680,996 worth of grapes produced in this district, \$20,000,000 worth were champagne grapes, grown in the vicinity of Rheims and Epernay on 45,000 acres of land. The exports of champagne during the fiscal year ended March 31, 1906, amounted to 41,332,825 quart bottles, or 6,122,780 more than in 1905. The United States took 4,523,508 bottles. Deducting 10,000,000 bottles of the lower grades (the last pressings), which are consumed in France, and which can not be exported to countries with a high tariff, the United States consumed, approximately, one-seventh of the high-grade champagne sold to all the world. The United States paid for champagne \$5,507,255, or about \$122 per acre for the 45,000 acres in grapes. The total export trade in champagne was valued at \$40,000,000 or \$888 per acre devoted to grapes, or \$14 for each inhabitant of the consular district, or \$1 per capita for the entire population of France.

There were sixty different varieties of articles exported from Rheims and nine from the agency at Troyes during the fiscal year ended March 31, 1906. The principal articles of export from Rheims to the United States were: Champagne, \$5,507,255; kid gloves, \$425,738; hosiery, \$336,288; cotton embroidery, \$77,085; willow ware, \$52,849; plate glass, \$56,346; antimony and caoutchouc, \$40,036; artificial silk, \$29,359; pig iron, \$30,122; chloride of lime, \$24,496, and sheepskins, \$23,002.

URUGUAY POTATO.

SEED AVAILABLE OF DROUGHT-RESISTING AND FLAVORED TUBER.

Consul Oscar Malmros, at Rouen, reports that Mr. Labergerie, of the department of Vienne, who first experimented in France with the Uruguay potato and produced a variety called the "Solanum Commersoni Violet," has now been able to place on the market, in a perfected form, a limited quantity of this article, mention of which was made in Daily Consular and Trade Reports for July 19, 1905, and concerning which many American inquiries have since been made in regard to its cultivation. Mr. Malmros writes:

According to communications of noted French scientists to the Société Nationale d'Agriculture de France this Violet variety possesses great nutritive value, and its taste is good or very good according to the different soils in which it may be planted. It compares well with the table potatoes known in France, with this additional quality—that the still green parts of the tuber are entirely free from all bitter taste, which indicates an absence of solanine. In the wild Uruguay potato this bitter taste is characteristic. This has been confirmed by analysis of the laboratory of the National Agronomic Institute of France. The boiled Violet potato, when cold, is said to be without the disagreeable soapy taste of the common potato. The Solanum Commersoni Violet also bears aerial potatoes, but these when planted give a smaller crop and are less rich in starch than the underground tubers. ◆

GROWS IN A WET SOIL.

The percentage in starch ranges from 14 per cent in very wet soil to 18 per cent in very dry soil. It prospers most in a damp, or wet, or even swampy soil where no other kind of potato would grow. On very damp soil the crop is said to have been at the rate of over 79,000 pounds per acre. With increasing dryness the quantity of the crop gradually diminishes and on very dry soil is about 30 per cent less than on wet soil. With abundance of water and light the crops have always been colossal. Every kind of soil, whether clayey, calcareous, or siliceous, seems equally adapted for its culture, provided it is damp. The plant, moreover is distinguished by its resistance to disease, five attempts to infect it by the director of vegetable pathology at Paris having completely failed. Its power of resisting frost is claimed to be greater than that of any other species of potato, the young sprouts of the tubercule having been able to bear without injury a temperature of 2 degrees below the freezing point. The potato grows just below the soil, which greatly facilitates the digging.

Mr. Labergerie advises the following mode of culture of this potato for the climate of France: To plant from March 1 in dry soil and to postpone the planting, according to the humidity of the soil, until May 15 for very wet soil; to plant 2½ to 3 inches deep in dry soil, decreasing the depth in proportion to increase of humidity of soil and planting in very wet land even with the soil and in swamps in ridges. The potato is of oblong shape, and ought to be planted on the flat side and not standing on end. For planting, potatoes or sections thereof of 2½

to 3½ ounces seem to give the best crops. The best distance of planting is 18 to 22 inches in every direction. A single plowing between the rows after planting is sufficient.

EFFECT OF FERTILIZERS.

Manures, if employed, are the same as for ordinary potatoes. They seem to have but a small, if any, influence on the crop, with the exception of common dung, which, if employed to excess, increases the quantity of the crop but diminishes the percentage of starch. Experience so far has shown that crops and quality improve by planting the potato for some years in succession in the same ground, as in course of time it seems to adapt itself more perfectly to the soil in which it is planted. Other varieties of the *Solanum Commersoni* than the Violet, for example the white or yellow, have so far not proved a success, and if the root of the Violet should exceptionally produce some of such varieties they are not to be used as seed potatoes.

The sole person authorized by Mr. Labergerie for France and foreign countries to sell the Violet Uruguay potato is Mr. Forgeot, 33 Rue Réaumur, Paris, who sells and ships the article by the 10 kilograms (22 pounds), at the price of 5 francs per kilogram (about 44 cents per pound). Cost of packing, freight, insurance, etc., have to be paid for extra.

UNITED KINGDOM.

ENGLISH CLOG INDUSTRY.

IMPORTANT BRITISH INDUSTRY—SUGGESTIONS FOR AMERICAN MANUFACTURERS.

Special Agent William Whittam, jr., has furnished an interesting report on the clog industry of northern England. He explains that an acknowledged authority has estimated there are at least 4,000,000 pairs of clogs sold in the northern counties every year. A good description of the clog and the process of manufacture are furnished, and Mr. Whittam suggests that American manufacturers might successfully compete with those of England in the production of certain parts of this peculiar foot wear. A number of samples have been furnished by Mr. Whittam, which will be loaned interested parties in the order of application. His report follows:

The "clog" is a sort of shoe with a wooden sole (made in one piece) and a leather top. The sole of the clog is finished with a set of "cokers" or "irons," one for the heel and another for the front of the sole. These irons are about a quarter of an inch wide, one-eighth of an inch thick, and are made to fit the shape of the sole somewhat as a shoe is fitted to a horse's hoof. This investigation was suggested to me by United States Consul William H. Bradley, of Manchester. I am of the opinion that a good trade might be built up in supplying either machine-made wood soles, or the "blocks" from which the hand sole makers shape the finished sole, as well as in the "irons" or "cokers."

The process of clog-sole making by machinery is, broadly, as fol-

lows: A log is cut into "cheeses," the thickness of each cheese or circular section corresponding with the length of sole required, enough margin being left to allow for subsequent finishing operations. Each cheese is next sawed and planked to the width of sole "block" needed by a vertical cut. By this method of cutting the grain of the wood runs in the proper direction. An iron pattern, or "marker," is next clamped on the planks, and a band saw then shapes the blocks into their final form for manipulation by either the hand or machine sole maker. Up to this stage all blocks are the same shape, no difference being made between "rights" and "lefts." Taking an average of the sizes commonly used, these "blocks" sell for 2 shillings and 3 pence a dozen pairs. The tools required for these processes are such as are used in every wood-working establishment.

SOLE MAKING FROM BLOCKS.

Special though simple and inexpensive machinery is required for the work of making the finished soles from the "blocks" just described, but instead of entering into what must necessarily be an inadequate description of these contrivances I am sending herewith the name of a firm which will furnish full information to interested inquirers. The several processes in their order are:

First. A modified "shaper" and planer combined, which will produce an average of 100 dozen pairs per day of ten hours.

Second. A "taper" to bevel the edges of the soles; this machine also produces 100 dozen per ten hours.

Third. A machine for forming the round heel.

Fourth. A machine for hollowing the inside of the sole to conform to the shape of the foot.

Fifth. A machine for hollowing the instep on the outside of the sole.

All these machines generally "follow on," or, in other words, each has a capacity sufficient to supply the succeeding machine in the process.

Sixth. The "gripping" or grooving machine, which forms the groove into which the leather tops are fitted and to which they are secured by short nails of either brass or iron. An average workman will turn off from 60 to 80 dozen pairs each ten hours from one machine.

I am told that the labor cost of all the operations from "blocks" to finished soles is only 6 pence per dozen pairs, while the difference between the selling price of the "blocks" and the finished soles is 2 shillings per dozen pairs.

Among "the hand-sole shapers" in the older "cloggers" stores there is a prejudice against the machine-made soles, said to be due altogether to a fear that machinery may supplant what is now really highly skilled manual labor; but as not nearly enough apprentices are forthcoming to keep the supply up to normal, the triumph of the machine-made article is practically certain. Therefore, as we have the raw material in abundance the inference is that we ought to make a strong effort to supply what bids fair to be a growing demand for these soles. The prejudice mentioned has caused a temporary difference of $1\frac{1}{2}$ pence per pair of soles against the machine-made articles, but the price quoted is for the machine-made product. The intelligent workman admits that the machine output is superior in every way, and even

the prejudiced handicraftsman admits that the purchaser does not know the difference and that no question as to hand or machine made product is ever asked by clog users.

KINDS OF LUMBER USED FOR SOLES.

Different woods are preferred in different districts. The workers in factories and other indoor occupations in such districts as Bolton, Oldham, and Preston prefer a sole made from either alder or birch, while in the colliery districts, such as Wigan, beech, birch, and ash are most generally used, the first named in each instance being in greatest demand. Some idea of the immense quantity of soles used may be gathered from an estimate that each pair of clogs will be resoled twice before being replaced by a new pair, thus averaging three pairs of soles to the life of one pair of clogs. There is but one concern in Great Britain making these by machinery—Thomas Jenkinson, 148 Deansgate, Bolton, England.

I am sending to the Bureau of Manufactures four finished pairs of clogs of average style and quality, being one pair each of men's, women's, youths', and children's; also a few "blocks," from which soles are shaped, together with a full set of machine-made soles, covering every size used, and a few handmade soles, to show the difference in workmanship. The machine-finished soles sell from 4 shillings and 3 pence to 4 shillings and 6 pence per dozen pairs.

CLOG IRONS.

The irons previously mentioned are nearly all handmade, although I am told that a set of machines are now used to a slight extent, which reduce the cost of production very materially. The average piece-work price paid for making a gross pairs of heel irons by hand is 1 shilling and 2 pence, while 1 shilling and 4 pence is the price paid for making by hand a gross pairs of front irons. The total price paid to the operators of machinery for the same work is 3½ pence per gross pairs of heels, and 3 pence per gross pairs of front irons. These machines are operated by boys and do not require skilled labor.

I send herewith a set of heel and front irons, covering the full range of sizes. Each pair of clogs will be reironed two to three times before being worn out. It remains for our iron and wood workers after inspecting the samples and taking material, labor, and selling prices into consideration to determine whether they can profitably enter this new field or not.

HARNESS MAKING.

FACTORIES TAKING TO SPECIALTIES IN FEAR OF AUTOMOBILE SUPREMACY.

Consul Albert Halstead writes that in the Birmingham district are made almost half of the leather manufactures of the United Kingdom. He continues:

The exports of leather goods from this district are constantly increasing. The introduction of the automobile and its more general use does not seem as yet to have affected unfavorably the output of harness and other leather articles necessary for horses. If anything this industry

is more active now than in some years. Some manufacturers of harness have turned their attention to other leather specialties without lessening their output of harness and the like in order to prepare for the time when automobiles or some other form of mechanical traction shall supersede transport by horses. In Birmingham itself is manufactured not a little of machine-sewn leather goods. The Birmingham leather workers number about 5,000.

My understanding is that more machine-sewn leather goods are made in this city than those that are hand sewn. In the neighboring borough of Walsall practically all the leather goods, harness, and leather specialties are hand sewn, 10,000 people being employed. English harness is made by hand for the most part and in small quantities on order. Most of this is sewn by women, whose wages are from 12 shillings (\$2.91) to 16 shillings (\$3.89) per week. The average woman leather sewer does about half the amount of work that a man, who earns from \$10 to \$13.50 a week, would do in the United States. It has been found in Walsall that the women do better on the light work than the men, and that there are only a few things a woman can not do better in the leather sewing than a man, and these are in heavy sewing. Generations of leather sewing have trained the women in this trade so as to make their work more nearly perfect.

HOW THE LEATHER INDUSTRY DEVELOPED.

It is interesting to note that the leather-sewing industry of Walsall started many years ago around the shoe-buckle industry. Before the days when saddlery manufacture was sufficient to make an industry, people wore shoes with large buckles, and a shoe buckle and hardware industry established in Walsall led to the gradual development of the leather-sewing industry. With the increased use of horses came the manufacture of stirrups and then the leather industry, so that now the latter, with large tanneries which were a natural accompaniment, is the general industry of Walsall, and shoe buckles and stirrups and other hardware are side issues.

Harness, bridles, etc., are about the same in general style here as in the United States, but they have the reputation of being better made, both because they are so generally hand sewn and because there is greater care in the selection of the leather. For instance, in traces, the leather is chosen so as to make them more nearly of the same strength throughout. Straps making up the harness are blacked, creased, and the edges are rounded in the United Kingdom as are those used in the United States. This work is done in the harness factories, generally by apprentices, of whom there is a large number, in proportion to the regular leather workers in every factory. Where apprentices are not so employed the work is done by women, whose wages are from 1 shilling (24 cents) to 2 shillings (48 cents) a day. A leading Walsall manufacturer of leather goods informs me that with the available number of apprentices and the comparative cheapness of women labor, there would be no advantages in the way of economy to him, or, as far as he could see, to any other leather goods manufacturer in the use of a labor-saving machine such as is used by manufacturers and jobbers of harness and saddlery in the United States. Such machines might be sold in Birmingham itself, because of the comparatively large amount of machine-sewn leather goods

made in this city, but no new machinery in England is accepted on promises. There must be visual proof of its utility and advantages.

AN ENGLISH OBJECTION.

OBSTACLE IN WAY OF PLACING GOODS ABROAD.

A recent experience of Consul Halstead, in an effort to help introduce an American novelty into the United Kingdom carries a lesson that he thinks should be learned by Americans who would enter the foreign market. The consul writes:

As a result of one of my consular reports a letter came from an American manufacturer asking if he could be put into communication with some firm who might be interested in handling his product. I wrote to a large and substantial firm of merchants here and received a reply that was noncommittal as regards the American novelty offered, but contained the following paragraph, which is most instructive:

We carry a large and varied stock, including some American goods, but there is a limit to these, and we do not often find American producers considerate. They generally want to sell out and out, cash down on shipment, and we are not disposed to take all the responsibility and risks in creating a sale. To have samples and take orders to be delivered is too slow, and contrary to what our customers look for from us. If any of your correspondents are prepared to venture something we are confident that we can be useful to them and help to justify it, but to buy out and out shipments of all articles that they think would sell at sight on this side we are not prepared to do.

The experience of this firm is not exceptional. American exporters insist very frequently on being paid f. o. b. New York. They will give little credit to foreign firms and demand an acceptance of goods unexamined. They offer the would-be purchaser no opportunity to see that the goods are up to sample, are exactly as ordered, and have arrived in good shape. They manifest little, if any, faith in the foreign buyer and demand an almost unlimited faith in themselves. When citizens of other exporting nations give long credits and large discounts for cash and smaller discounts for payment within comparatively short periods, quoting prices delivered at a seaport in the country to which they are exporting, or at the point of destination inland, such exporters naturally capture trade which the American exporter could have if he did likewise.

In addition to this lack of faith in the foreign purchaser is the fact that goods sold f. o. b. in New York cost much more for shipment from the American seaboard to the foreign seaport or inland city than those upon which the freight has been paid by the shipper. The shipper has the opportunity of getting freight rates from several steamship lines. That means competition, and consequently lower freight charges. The foreign shipper, if the goods are sent "freight collect," must pay the freight charges assessed on the goods on their receipt. He can not calculate in advance upon the exact cost of shipment, and can not therefore know when ordering the exact cost of his purchase. This is manifestly a decided disadvantage to the foreign buyer. The American exporter must take his share of responsibility and risk or lose the chance of making a sale.

IMITATION PRECIOUS STONES.

REMARKABLE RESULTS ACHIEVED IN THEIR PRODUCTION.

Mr. Halstead reports as follows in regard to successful methods of imitating certain precious stones.

Birmingham is the center of jewelry manufacture in the United Kingdom. Here are trained jewelers of the most skillful kind. Jewelry workmen have emigrated from Birmingham to the United States in such large numbers that a few years ago in one of the largest silverware manufactories in America there were employed 600 men who had learned their trade in the Birmingham district. Not a little jewelry was formerly exported from this district to the United States, but the development of the art in all classes of jewelry in America has materially reduced Birmingham's exports. Still the trade here is reported to be better than for some time, although manufacturers complain that things are not as they were. The keen competition of German cheap and imitation jewelry has so seriously interfered with Birmingham manufacturers that they now make comparatively little imitation jewelry. Much 9-carat gold jewelry is still made here, but the finer type of jewelry is Birmingham's staple.

The Birmingham Daily Mail shows how adept fakirs have become in recent years, now that the prices of genuine precious stones of the highest quality have greatly increased. The diamond seems to be the only stone that resists successful imitation. The ruby, sapphire, emerald, and pearl are skillfully imitated. Even experts find it hard to detect the fraudulent gems. Defective white pearls can be converted into brown or even black ones. A converted black pearl has been so well colored that it sold at a fabulous price.

Imitation pearls are plentiful and look so like the real thing that they deceive experts. They are made by means of a transparent glass shell, a little glue, and some essence of the Orient, a silvery, pearly substance, composed of fine scales rubbed from a small fish called the "bleak" or the "ablete," 17,000 of which require rubbing to get a pound. Even turquoise are not above suspicion.

SPARK SCREENS NEEDED.

OPPORTUNITY THAT MAY RESULT IN SOME SALES IN ENGLAND.

Consul Halstead also reports a movement in England to secure greater safety to life and property from the flying sparks or cinders of locomotives. He cites the death of a lady whose summer dress was ignited by a flying spark, also losses to farmers and others from fires caused by locomotives. He writes:

Smokestacks of locomotives in Great Britain are not supplied with screens to prevent the emission of sparks and big burning cinders. Such a device is said to be used here, however, for traction engines employed for agricultural purposes. Complaints of burning cinders have been very numerous this year, and it is suggested that the English railway managers should immediately adopt spark arresters, such as are used in the United States. So long, in fact, have they been used in America that the patents upon them have probably expired; but it

is just possible that such American devices might be sold to English railways, now that the dangers from sparks, not only to individuals and property, but also to the beautiful turf that lines the banks of most British railways, has been so forcibly shown this dry season. The question is certainly worth investigation.

HUDDERSFIELD.

AMERICAN PRODUCTS SELLING FAIRLY WELL.

Consul F. I. Bright, of Huddersfield, reports conditions in that city and the consular district of which it is the center, during the last six months of 1905, as prosperous. He writes:

Although there has been a decrease in the total of declared exports to the United States, as compared with the corresponding six months of 1904, the general review is regarded with satisfaction. This decrease is more than accounted for by the great falling off in wool, which shows a loss of \$190,320. The exports in the best grades of woolens and worsteds show a substantial increase. The total exports to the United States for the last six months of 1905 amounted to \$616,651, a decrease of \$88,786 compared with 1904. The articles of export were: Worsteds, \$146,588; chemicals and dyes, \$114,586; woolens, \$99,360; machinery, \$86,371; wool, \$65,012; sewing cotton, \$22,641, and all other articles, \$82,094.

AMERICAN GOODS POPULAR.

Within the last few years American cash registers have been sold extensively. A number of cereal breakfast foods, toilet soap, and a large variety of canned vegetable and fruit preparations have been successfully introduced.

American-made firearms—rifles, shotguns, and revolvers—sell here; also photographic supplies, boilers and radiators, scales, wooden ware for household uses, and many other articles. There is a demand for noncorrosive kitchen ware. The American goods upon the market represent only a portion of the grand total which finds its way into the wholesale houses of the great English centers. However, a district containing over 225,000 inhabitants should not be overlooked, and more effort is required than merely landing the goods at London, Liverpool, Manchester, or other importing places. The "demonstration method" has been used with marked success in extending American trade in this district. Space has been given in the stores of local merchants for "demonstration periods," during which agents exhibit certain lines of American goods with gratifying results.

CHANGING DYESTUFFS TRADE.

Consul Bright makes a report on the chemical industry, as follows:

A Huddersfield paper describes the decadence of Great Britain's aniline industry, and calls for a revival, saying that it is regrettable that this important industry is fast slipping from them, and that Germany and Switzerland now supply the great bulk of the aniline dyestuffs used in Great Britain and the world. While the British exports of dyestuffs have been decreasing there has been a corresponding increase in the exports of the materials and chemicals from which the dyes are made. The larger amount of these going to the United States from Huddersfield, as well as the decline in dyestuff shipments, would

seem to indicate progress among the American dye manufacturers. The following table shows the value of such exports to the United States for the past five fiscal years ending June 30:

Year.	Dyes.	Chemicals.	Year.	Dyes.	Chemicals.
1902.....	\$137,954	\$58,626	1905.....	\$92,944	\$141,816
1903.....	111,133	68,423	1906.....	83,249	156,317
1904.....	115,186	149,765			

RAILWAY OPERATIONS.

CAPITALIZATION IS NOW OVER SIX BILLION DOLLARS.

Consul-General Robert J. Wynne, of London, reviews the railroad situation in Great Britain as presented in the annual official railway returns.

The official report deals with all the lines in the United Kingdom, covering a mileage of 52,322, made up of 38,431 miles running track and 13,891 miles of sidings. Comparison of 1905 with 1904 shows that there were small increases in capital, gross receipts, working expenditure, and net earnings, and that the percentage of net earnings to total capital remained approximately the same. The total amount of railway capital returned at the close of 1905 was nearly \$6,415,000,000, of which more than \$970,000,000, or approximately 15 per cent, was due to nominal additions, the latter forming approximately 18½ per cent of the ordinary stock, 13½ per cent of the guaranteed and preference stocks, and 13 per cent of the loans and debenture stock.

At the end of 1905 the total amounts of capital, compared with the corresponding amounts of 1904, showed an increase of about 3¼ millions in the ordinary, 7¼ millions in the guaranteed and preference, and 3¼ millions in the loans and debenture stock, making a total increase of 14¼ millions, a comparatively small increase.

Both passenger and freight traffic receipts were greater than in 1904, the latter having increased by a million pounds sterling. The total working expenditure of the railway companies advanced last year to the extent of \$4,450,000 compared with 1904. The proportion of working expenses to gross receipts remains at the same figure as in 1902, 1903, and 1904, viz., 62 per cent. Since 1896 there has been a total increase under the head of rates and taxes of \$8,920,000, and as compared with the total of 1896 the sum paid by the companies in 1905 showed an advance of about 56 per cent. As a set-off to an item against this growth it may be noted that the decline in the cost of fuel, begun in 1902, continued last year. During the same period the cost of rails showed the same tendency.

RAILROADS IN IRELAND.

From official returns just published, Consul H. S. Culver, of Cork, shows that there were on December 31, 1905, 3,313 miles of railway open for traffic in Ireland.

The amount of capital authorized and paid up was £38,405,255. The receipts from all sources amounted to £4,108,678, as compared with £4,139,948 in 1904. The working expenditure was £2,526,877, a decrease of £30,000 on the preceding year, while the net receipts were

£1,581,801, a decrease of £1,200 compared with 1904. The passenger traffic yielded £2,140,679; goods, £1,626,761; steamboats, harbors, canals, and docks, £11,626, and miscellaneous, £129,612. The number of passenger journeys was 29,025,575 and the number of miles traveled 17,727,321.

ENGLISH ALCOHOL MAKERS COMBINE.

The first result of the British revenue act, 1906, which has just come into force, has been the formation of a convention among makers of methylated spirit, states a writer in the London Times, who says:

The revenue act provided for the use by manufacturers of a special methylated spirit on which the board of inland revenue grants a rebate of 5d. (10 cents) per gallon. The makers of this spirit, however, are only quoting at 4d. per gallon below the old price, instead of 5d. as anticipated. The price of methylated spirit, of the kind which could be used for motor cars if it were cheap enough, remains unchanged for the present. In Germany, where the use of duty-free alcohol for manufacturing and motive purposes has been allowed for many years, the spirit industry has also come into the hands of a trust, with the result that the advantages which should accrue from the use of an untaxed spirit are becoming smaller. Had competition in the English market in industrial alcohol continued there was every possibility of our manufacturers being able to produce certain articles as cheaply as the Germans, but there are distinct signs that competition is at an end.

SCOTLAND.

COMMERCIAL GROWTH GRADUAL BUT HEALTHY.

Consul R. W. Fleming, of Edinburgh, furnishes a report on the foreign commerce of his consular district for 1905, which shows an increase in imports and exports. The report follows:

The value of imports into the Edinburgh consular district was \$85,442,041, an increase of \$3,710,463 over 1904; exports were valued at \$37,109,935, an increase of \$2,574,131. The principal articles of import, those showing the largest increases, were: Paper-making materials, rising from \$2,467,362 to \$2,508,807; margarin, increase from \$1,853,713 to \$2,049,478; butter, from \$10,749,923 to \$11,571,758; iron, and iron and steel manufactures, from \$2,786,035 to \$3,292,845; sugar, from \$7,999,064 to \$9,107,567; wood, hewn and sawn, from \$3,703,158 to \$4,005,339; and flour, from \$2,439,574 to \$2,765,030. Among the articles showing a decrease were woolen yarns, from \$3,049,286 to \$2,835,164; paper, from \$2,643,566 to \$2,342,917, and machinery and millwork, from \$887,601 to \$683,330. There was no material change in imports of linen yarns or of woolen and worsted manufactures. The decline in imports of glass was due to the increased use of British-made bottles in the ale and whisky trade. Exports of machinery and millwork declined slightly.

Noteworthy increases in exports were made in cotton goods, which advanced from \$3,353,948 to \$3,937,276; fertilizers, from \$2,146,710 to \$2,363,391; herrings, from \$1,465,056 to \$2,198,086; manufactures of linen, including yarn, from \$2,178,197 to \$2,204,841. The cotton and linen goods exported were not manufactured in this district, but came principally from the west coast of Scotland. The exports from

Edinburgh to the United States were valued at \$1,300,881, a decrease of \$171,762 compared with 1904. There was a slight increase in books, pig iron, and whisky, and a decline in the shipments of wool.

TRADE OF LEITH AND GRANGEMOUTH.

The value of the imports into Leith (the port of Edinburgh) amounted to \$62,067,691, and into Grangemouth \$19,996,510, the principal articles of which are shown in the following table for the year 1905:

Articles.	Leith.	Grange- mouth.	Articles.	Leith.	Grange- mouth.
Breadstuffs	\$11,490,472	\$302,293	Metals and ores.....	\$1,064,368	\$3,156,558
Caoutchouc	559,721	31,885	Oil	505,984	896,536
Chemicals	553,300	337,318	Oil cake.....	540,581	.....
Cotton, manufactures of..	458,833	435,990	Paper, etc	1,018,378	930,489
Eggs.....	4,816,818	49,332	Paper-making material....	303,932	1,005,531
Fertilizers.....	784,081	119,171	Provisions	13,311,819	1,479,474
Flax.....	1,315,366	190,171	Seeds	1,249,371	.....
Glass	1,010,723	551,593	Sugar	7,340,093	1,769,474
Hemp	531,806	.....	Vegetables.....	730,938	49,716
Jute yarn.....	358,632	.....	Wine	550,557	.....
Iron, manufactures of....	725,104	629,648	Wood, and manufactures of	1,508,980	2,497,105
Linen yarn	1,491,276	2,862	Wool and woolen goods....	2,520,828	1,318,422

INDUSTRIES ACTIVE AND UP TO DATE—CANADIAN CHEESE ATTACKED.

Installing improved appliances.—In most industries, and especially in iron and steel production, Scottish manufacturers are giving closer attention than ever before to the economical working of their plants. Managers of steel works are reducing coal consumption by utilizing much of the exhaust steam heretofore wasted, and are substituting for antiquated or second-rate machinery the latest and best appliances almost regardless of cost. The same progressive spirit is manifest in iron and brass foundries, boot and shoe factories, and electrical engineering companies. Any improved machine tools or other labor-saving devices will, it is believed, sell readily in Scotland for some time to come.

Road dust.—Road committees and sanitary authorities in various counties are struggling with the dust problem, which has become a subject of serious public concern since motor vehicles began to disintegrate road surfaces. Hot tar, solutions of oil and tar, and other materials have been tried with some success, at a cost of \$50 to \$300 per mile of 6-yards road for the first application, which usually lasts two months. In one county a road surveyor has invented a machine for forcing tar under pressure into the materials forming the surface of roads, and it is said that excellent results have been accomplished, not only in reducing the dust, but also in preventing the wear of the "metal." A prominent member of a county council informs me that one strong objection to the tar treatment in any form is the black dust arising after a time, in a high wind, which "makes the cure worse than the disease." Road experts are inclined to doubt if any of the materials or methods now employed to prevent dust will prove satisfactory. They hold that if there is to be no change in the construction of motor cars, elevating the body farther from the ground to put an end to the dust nuisance, roads must be made of waterproof materials, which will render them practically dustless. They agree that the construction of such roads is an easy matter, from an engineering point of view, but say that the cost would probably cause a more indignant public outcry than the dust now provokes.

Deep coal pits.—From a discussion in the local press as to the greatest depth at which coal mining is carried on in Scotland, it appears that a pit in Fife is 1,998 feet deep; one at Niddrie, Midlothian, 2,163 feet, and another at Niddrie, 2,448 feet. In the opinion of mining engineers it would be impracticable to work coal in this country at a greater depth than 4,000 feet.

Canadian cheese under suspicion.—Canadian cheese makers have during the last ten years gained a strong position in this market, but the reputation of their product here seems to have been adversely affected by reports which recently came to this side in regard to the general management of milk in Canada. In the *Edinburgh Scotsman* of September 7 the agricultural editor says:

At the recent medical congress in Toronto an exceedingly interesting and suggestive paper on the control of milk supplies was read by Professor Harcourt, of the Guelph Agricultural College, Ontario. He had great fault to find with the manner in which milk was kept and handled in Canada, and he added the remarkable statement that if a commission were appointed in that country to investigate the conditions under which milk was handled and delivered to the consumer, the report of the commission would be worse than the recent revelations relating to the meat-packing establishments in Chicago. If the general handling of milk in Canada is so unsatisfactory as this statement would indicate, it will hardly be contended that Canadian cheese is entirely beyond suspicion. Here, indeed, there is additional evidence of the need for increased vigilance on the part of our own authorities in testing and checking the purity and quality of imported dairy and other produce.

MALTA.

SUPPLIES FROM UNITED STATES.

Consul J. H. Grout reports on the trade of Malta, as follows:

The commerce of Valetta depends much upon the competition of other ports of call nearby. Notwithstanding the cut prices at many of the ports, the port of Valetta, on account of its easy access, safe anchorage, and quick dispatch in bunkering, received its share of the Mediterranean business. The importations of foodstuffs, dry goods, and building materials, exceeded those of any other year. This was due to the natural increase in population and to the continued prosperity of the laboring classes, who have an abundance of work at good wages.

American flour, which was being imported in increasing quantities to such an extent that it had nearly become the only flour used, received a serious check by reason of prohibitive prices and is still falling behind. Cotton-seed oil, lard, canned meats, and other lines maintained their position. American leaf tobacco, which is used for the manufacture of strong cigars and for pipe smoking, was imported direct and from British and French ports to a fair extent. Raw leaf is taxed 4 cents a pound, whereas plug tobacco pays a duty of 18 cents a pound. The plug tobacco has always been bought principally by the older soldiers stationed at the garrison, but the arrival of younger troops has curtailed its consumption because of their general use of cigarettes.

In the matter of petroleum, the cheaper grades of Russian oil have been imported in bulk and in this manner distributed to consumers. The use of gasoline has increased, owing to the demand for its use for motive power. Of late years some attention has been given to the importation of vines, trees, plants, etc. American varieties, to a certain extent, have been favored.

The imports, by countries, into Malta for the fiscal years ended March 31, 1905 and 1906, are shown in the following statement:

Country.	1905.	1906.	Country.	1905.	1906.
Russia.....	\$1,395,070	\$1,363,686	United States	\$238,899	\$268,514
United Kingdom.....	1,165,644	1,060,305	France	158,847	171,077
Turkey	940,855	977,651	Tunis	75,056	170,582
Austria-Hungary.....	611,977	564,475	Australia.....	176,605	126,875
Italy	712,246	548,630	Other countries	289,044	190,749
Barbary	342,470	409,399			
Greece.....	379,869	378,020	Total.....	6,486,582	6,229,913

ST. HELENA'S COMMERCE.

St. Helena's total foreign trade for the first six months of 1906, writes Consul R. P. Pooley, amounted to \$109,690; imports, \$108,545; exports, \$1,145. The imports from Great Britain amounted to \$105,820; from Cape Colony, \$2,600; United States, \$80, and Australia, \$45. The exports to Great Britain were valued at \$25; South Africa, \$1,100, and Paraguay, \$20. The principal articles of import were: Oilmen's stores, valued at \$25,555; provisions, \$6,570; spirits, wine, and malt liquors, \$13,020, and coal, \$15,300. Potatoes, hides, and skins constituted the articles of export.

THE NETHERLANDS.

DUTCH TRADE AND INDUSTRIAL CONDITIONS.

RECEPTIVE MOOD FOR AMERICAN GOODS—MANY LINES OF MERCHANDISE COULD BE SOLD.

Special Agent Arthur B. Butman made a study of the import business of the Netherlands, and submits the results of his investigations to the American export interests in the following letter from that country:

The Netherlands has a population of 5,500,000 people, and, including the province of Limburg, an area of 12,650 square miles. In the broad sense of the word, the Netherlands is not a manufacturing country, and with its entire absence of national prejudice against American products and the direct means of transportation available from the United States affords a good market to the American manufacturer and merchant desirous of cultivating trade with the country. The Dutch people are naturally a tenacious race, so that if once the American exporter secures this trade he will be certain of a continued market for his goods; provided, of course, that he meets Dutch requirements. In the foreign trade of the Netherlands, as shown by the following table representing exports and imports for consumption, it will be seen that Germany is far in the lead:

Countries.	Imports.		Exports.	
	1903.	1904.	1903.	1904.
United States	\$93,174,665	\$93,361,947	\$42,583,425	\$38,879,860
Germany	243,059,184	223,887,591	391,105,466	418,057,294
Dutch East Indies	135,445,235	151,223,954	24,733,314	27,261,389
United Kingdom	103,324,759	101,604,614	185,104,043	174,222,079
Belgium	91,487,474	104,054,974	85,713,410	88,952,376

NOTE.—Figures for 1905 of countries not yet available.

These figures are as correct as it is possible to obtain. In imports many free goods are included for home consumption, though they leave the country. In exports, also, direct transit goods are not included.

If the American manufacturer would send able representatives to the Netherlands much would be gained. I learn from interviews with the heads of many principal houses that where ignorance exists concerning American products, there is invariably a desire for information regarding them. Manufacturers who do not deem it practical to send representatives to the Netherlands and are desirous of securing Dutch trade should send catalogues and printed matter to dealers in both the Dutch and English languages. When a retail dealer handles American goods, no matter in how small a way, this advertising matter should be supplemented by show cards for window display.

BOOTS AND SHOES.

The shoe industry of the Netherlands is principally contained within the province of Noord Brabant, where there are about 25 or 30 factories—machine operating—each factory producing from 1,200 to 1,500 pairs per week. There are about three times this number turning out handmade shoes in small quantities. The machine-manufactured product is sold by retailers from \$1.60, the handmade from \$2.40. The wooden shoes, still worn in the small and remote villages and their outlying districts, sell for 20 and 30 cents per pair. All these prices apply to both women's and men's footwear.

The amount of the boot and shoe exports of the United Kingdom for the year 1905 to the Netherlands was 22,082 dozen pairs, at a value of \$198,830, while the amount of the boot and shoe exports of the United States to Holland for the year 1905 was only 6,686 pairs, at a value of \$11,339. Figures of other countries are not available. Retail stores, where both English and German boots and shoes are exclusively and separately sold, are maintained in Amsterdam. American shoes are also on sale in several stores, the largest dealer being P. J. Van Wamel. This dealer conducts three stores in the city, in two of which the business is carried on under the name of The American Shoe Company, although the line of American goods carried is smaller than that of either German, English, French, Belgian, or domestic manufacture, all of which countries are represented. This shows that the name "The American shoe" is considered a good business medium, matter of price being largely responsible for the smaller stock carried of the American product.

This dealer assured me, however, that he was endeavoring to push the American article and that it gave good satisfaction. The price for the better grade of American shoes in the Netherlands is from \$4 to \$5, but in Amsterdam there is a larger market for a cheaper grade shoe to sell from \$2.50 to \$3. In shapes a straight last with round, medium toe is best liked. Stock, of box calf with heavy or medium sole for winter, and box calf and vici with light sole for summer wear. Styles are bals and low cuts or Oxfords.

AMERICAN SHOE TRADE IN ITS INFANCY.

Apropos of the name "American shoe" being considered a good business medium, my attention was attracted, when in Rotterdam, by a large sign, printed in Dutch, placarded on the glass door of a shoe store, purporting to advertise "American shoes, women's and men's,

Goodyear welt." I found the shoes were not American made, but "made by American machinery in a French factory." I may say that the French-made shoes strongly resemble the American shoes in shape and style, and the finish, while not up to the American standard for best grades, is very good.

Meddens & Zoon, of Rotterdam, dealers in "high-art clothing," an old established firm, have a very attractive and thoroughly up-to-date shoe department where American-made shoes are exclusively carried. These dealers handle men's and women's shoes of Brockton, Mass., and Chicago, Ill., makes. Although considering the American shoe trade in its infancy throughout the Netherlands, this firm reports very satisfactory returns for the two years during which the American shoe department has been established in their store. The goods are well liked and are found to give good satisfaction as to wearing qualities. In ladies' shoes the French style, with high heel and light sole, is preferred to the characteristic American style. Meddens & Zoon have a branch store at The Hague. They cater to the higher class of Dutch patronage and carry the better grade of American shoe.

It is claimed that a good boot and shoe trade might be carried on by the United States with the Netherlands if the American shoe manufacturer really desires the Dutch market sufficiently to follow up the natural progress of trade, cater to the tastes of the people, ship goods promptly (at present I am informed the manufacturer requires, or at least takes, a space of four months for filling a Dutch order), with attention to details of manufacture, give a reasonable time for credit, and be willing to spend a small amount in advertising his goods. These conditions being complied with, the American manufacturer may expect a steady customer and a constantly-increasing market in The Netherlands.

AGRICULTURAL IMPLEMENTS AND HARDWARE.

A great part of the Netherlands has been reclaimed by draining and so rendered extremely valuable for agricultural purposes; the fertility of land thus reclaimed being very great. The agricultural industry is accordingly large and creates a corresponding market for all implements therein employed. This market is at present principally supplied by Great Britain and Germany, though American farming implements were imported during the year 1905 to the value of \$201,819.

American mowers and binders are in good favor and sales for these are gradually increasing. Many of the American manufactured implements are built too light for satisfactory use in The Netherlands. This is especially true of the American hay rake, which is practically useless here as built for domestic trade, the grass in this country growing very coarse and heavy. The English and German manufacturers understanding the conditions of the country build implements suited to its needs. In smaller farming tools the American-manufactured articles are well liked and find a ready market in spite of English and German competition. I am informed by a large dealer in hardware that American stoves and kitchen utensils can find a good market here if only they be strongly constructed and a reasonable price is demanded. The assertion is often made that first shipments of American articles are always of good quality, but are after followed by those of inferior make. A strong, well-made article is wanted first, last, and always—one up to the standard in every particular.

German and English manufacturers take great care in minute details. The American manufacturer desiring to successfully compete with the manufacturers of these nations must do likewise. I think good sales of American butter churns could be made here, the present importation of this article being of Canadian manufacture. American machine lathes, shafting, hangers, iron and wood pulleys, are finding a good market here.

Rotterdam is the most active seaport in the Netherlands. About one-half of the total national imports by sea, and nearly one-half of the exports, pass through it, besides four-fifths of the Dutch trade with the Rhine. This city is the leading market for American tobacco, of which commodity we exported to the Netherlands during the year 1905, 21,474,876 pounds unmanufactured, at a total value of \$1,411,638, and of manufactured tobacco to the value of \$38,146.

OTHER COMMODITIES.

The Netherlands affords a good market for linseed-oil cake, which article is extensively used for cattle food; also for margarine, lubricating greases, and lubricating oils of all description. The rate of custom duties on greases and lubricating oils is about 20 cents per 100 kilos (220 pounds). In textile fabrics the manufactures of the Netherlands are mostly in white and plain goods, though a striped cotton known as "servant's cloth," used for servant's dresses, and colored shirtings are quite extensively made. White woven cottons are largely imported from England to be printed here for home consumption.

Owing to the great number of canals and waterways which intersect the country in all directions it should afford a splendid market for the motor pleasure boat. I was assured of this by a reliable importing agent at Rotterdam. This gentleman has recently purchased one of these boats for his own use, choosing it from the catalogue of an American builder. The boat was purchased with a guaranteed speed of 14 miles per hour, but is found to do but 11 miles per hour. The reply of the firm to a complaint regarding the speed of the boat brought forth this reply: "We are very sorry, but it is impossible to construct a boat on such and such lines with greater speed." "Why, then, advertise to do so?" remarked the gentleman. "I can now do nothing; I have the boat, they have my money. This is a good boat, but not as represented." I am again constrained to impress upon our American exporter the value of "goods as represented." This importing agent would be glad to handle a line of motor boats of reliable American manufacture, the same to be of good speed, not less than 14 miles per hour.

Holland, which is a favorite district for cyclists, on account of its excellent and level roads, has practically abandoned her purchases in bicycles from the United States, owing to the poor quality shipped. Two American makes of automobiles are now principally sold in Holland. Energetic American representatives might easily push forward this trade, as sales of automobiles are increasing.

The American organ is in demand and sales are good. Pianofortes and pianolas show small sales, but might be more successfully introduced by establishing agencies in the principal cities with sufficiently equipped showrooms. The soap market is controlled by English manufacturers, but toilet soaps of American make are well liked and sales are increasing. Cash registers, typewriting machines, and sewing machines of American make are in high favor and selling well.

PROPER SHIPPING AND SALES METHODS.

I wish to draw attention to the fact that goods shipped to this country must not be packed in cases without advising contents and value, even when sent with no charge, such as samples or advertising matter. The carrying facilities between the Netherlands and the United States are principally four lines of steamships, one from New York, one from Philadelphia, one from Boston, and one from Baltimore. These have frequent sailings; besides numbers of tramp steamers.

Terminal charges for general merchandise are about 16 cents per ton for goods in cases; goods in bulk by special arrangements. The custom of many American manufacturers of sending goods cash against documents, or that of bill of acceptance against documents, which really amounts to cash against documents, meets an objection of paying before seeing, and tends to restrict our trade in the Netherlands. Goods are generally bought here with payment in six weeks, 2 per cent discount and 90 days net.

The following table shows American trade by fiscal years with the Netherlands along certain lines, in many of which there is good opportunity for extension:

Articles.	Quantities.			Values.		
	1904.	1905.	1906.	1904.	1905.	1906.
Agricultural implements				\$231,192	\$201,819	\$606,335
Automobiles				11,909	14,690	16,151
Builders' hardware				161,769	170,140	234,378
Cash registers.....number..	456	608	520	45,876	66,542	50,137
Cotton, unmanufactured, up- land and other.....pounds..	8,027,551	15,581,277	9,245,053	984,263 83,636	1,298,877 131,922	874,712
Cotton linters	1,644,603	2,643,181				
Cotton, manufactured, cloths, uncolored.....yards..	18,519	30,485	5,130	4,987	7,515	1,476
Dried fruits.....pounds..	21,360,990	21,828,585	10,266,923	1,202,596	1,278,025	699,756
Grease, grease scraps, and all soap stock.....				32,703	46,203	147,252
Lubricating and heavy paraf- fin oil.....gallons..	5,424,718	6,569,410	9,485,260	685,441	823,462	1,092,361
Organs.....number..	1,394	1,670	1,598	61,627	75,493	66,908
Pianolas.....do.....	5	2	41	775	170	8,266
Sewing machines				369,864	431,334	470,927
Soap, fancy toilet.....				1,255	3,013	2,224
Steam engines, and parts of, stationary.....number..	10	8	32	3,459	3,039	11,627
Tobacco, unmanufactured, leaf, stems, and trimmings, pounds.....	22,294,070	21,473,876	19,596,577	1,504,722	1,411,638	1,272,788
Tobacco, manufactured, cigars, cigarettes, plug, and all other.....				57,641	38,146	46,405

During the year 1905 the Netherlands received from the United States 10,266,923 pounds of dried fruit, valued at \$699,756, of which apples constituted 6,287,268 pounds, valued at \$400,450.

GERMANY.

LIFE INSURANCE SYSTEM.

BUSINESS SCRUTINIZED AND CONTROLLED BY LAW.

According to a report on life insurance in the German Empire by Consul G. E. Eager, of Barmen, there are 44 companies doing business. During the year two companies suspended. Recent legislation has placed the life insurance companies under close imperial inspec-

tion and control. This has helped the companies, because it gives a guaranty to the public that hitherto was wanting. The consul writes:

A few companies sought to evade the word and spirit of the law, but were thwarted by the Government putting the superficial and worthless reports of these companies into the waste-paper basket and demanding other accurate and detailed reports, which were put before the public.

Of the 44 life insurance companies, 27 companies, in addition to the regular life organizations, have taken in other smaller insurances, such as burial fund, people's, and working-men's insurance.

The following statement for the last four years shows a continual increase in both regular life and the so-called small insurance returns, but a falling off in the combined plans, life endowment, etc., however small, for 1905.

	1902.	1903.	1904.	1905.
Regular life insurance.....	\$136,074,358	\$153,922,692	\$169,688,764	\$183,751,232
Life endowment insurance, etc.....	11,471,600	15,425,494	15,858,844	15,657,782
Small life insurance	28,569,044	33,993,540	36,579,410	38,480,078

The regular life plan showed, of course, the largest increase (\$14,042,000) during 1905. The increase in general life insurance is illustrated by the following statement:

	1902.	1903.	1904.	1905.
Regular life insurance.....	\$68,125,358	\$79,722,622	\$92,795,724	\$103,980,534
Life-endowment insurance, etc.....	743,968	5,669,160	24,752	497,182
Small life insurance	15,133,706	18,070,388	19,451,264	19,358,920

The old life insurance companies do not show as large an increase as the younger companies, they having considerably more death cases and consequently heavier dividends to pay, thus decreasing their average insurance amount. The total of general life insurance in all companies amounts to \$1,941,965,998.

STOCK COMPANIES IN FAVOR.

The greater part of all life insurance falls to the stock companies. According to the statement they show insurance to the amount of \$1,002,748,502, while the mutual companies foot up to \$939,217,496. Developments since 1900 are shown by the following table:

	1900.	1901.	1902.	1903.	1904.	1905.
Mutual compa- nies.....	\$778,260,000	\$800,000,000	\$830,000,000	\$859,000,000	\$897,000,000	\$940,000,000
Stock companies.	740,000,000	794,000,000	834,000,000	882,000,000	940,000,000	1,002,748,500

In 1900 and 1901 the mutual companies were considerably ahead of the stock companies; a change took place since 1902 in favor of the latter, and has continued up to the present time.

The tabular exhibit at the end of 1905 showed a capital investment of the entire insurance plan as follows: 1902, \$2,012,762,192; 1904, \$2,254,809,858; 1905, \$2,377,202,786.

In the year 1905 premiums to the amount of \$105,487,550, and interest, \$36,513,484, were received, against receipts of \$99,206,254, and \$33,639,396, respectively, in the preceding year. Payments of dividends (policies expiring by death, etc.) amounted to \$26,333,986 in 1905, against \$25,118,282 in 1904.

The cost of management of all the different institutions amounted to 14.7 per cent of the premium receipts.

STREET LIGHTING.

COMPARATIVE COST OF GAS AND ELECTRICITY IN BERLIN.

The different systems of street lighting in Berlin is the subject of a letter from Consul-General A. W. Thackara. He writes:

An English company which secured the charter eighty years ago for providing Berlin with gas continues in active operation, competing, however, with municipal gas works established later. The prices of gas have been reduced several times, and now stand at 83 to 87 cents per 1,000 cubic feet for lighting and 80 cents for cooking and for power. These price reductions lessened the profits of the gas works; nevertheless, profitable results have accrued to gas-works operations. For the fiscal year 1903 (the latest figures obtainable) the value of the municipal plants totaled \$24,564,000 and the receipts were \$7,085,896. The actual amount of loans on the plants were \$10,111,893, and \$425,854 was required for paying interest. Other expenditures were \$305,679 for redemption of debts and \$5,192,203 for working expenses, leaving a net balance of \$1,159,780. In addition to the three city gas works now in operation, which can produce about 1,000,000 cubic meters every twenty-four hours, a new large gas plant is in construction which will produce 780,000 cubic meters per day, and a plot of ground has been purchased on the Upper Spree for a similar gas works. That the municipal gas works is regarded as a commercial concern is proved by the fact that the contracts for the delivery of gas made with the public are considered as contracts according to civil law, like any other contract made between a merchant and his customer. The different systems of street gas lighting are the inverted Welsbach lights and the Erich and Gratz, each of which consumes 100 liters every hour, the upright Welsbach lights, which consume about 125 liters, and the Millenium, which consumes nine-tenths of a liter per Hefner candle.

THE CITY PROFITS BY CONTRACTS.

The supply of electricity for lighting and industrial purposes has for many years been in the hands of a private company, which is bound to light the streets at the same price charged for industrial purposes, which is 3.8 cents per kilowatt. Moreover, the company has to pay the city treasury 10 per cent of its gross proceeds and to give it a share in the clear profits of its business. If the clear profit exceeds 6 per cent of the joint stock up to the amount of \$4,760,000 the company must pay 50 per cent of the clear profit; should the joint stock be augmented beyond \$4,760,000, 50 per cent must then be paid of the clear profit that exceeds 4 per cent of the capital. Although this contract grants to the company the right to use the streets for electric conduits it provides that competition shall not be excluded. The municipality shall also be entitled in 1915 to claim that the whole electric plant shall pass into its hands on payment of the estimated value.

For the fiscal year 1903 the Berlin electric works paid to their shareholders \$569,772 and a total to the municipality of \$677,419. This is an excellent comparison with the 1899 figures, when \$449,820 went to the shareholders and a total of \$368,630 to the municipality. For lighting purposes the cost of electricity in Berlin ranges from 7.6 to 9.5 cents per kilowatt hour. Between the hours of 10 p. m. and 6 a. m. the rate is 7.14 cents. For industrial power purposes the rate is 3.8 cents per kilowatt hour.

THE COAL TRUST.

SHORTAGE IN SUPPLIES CAUSES DIFFICULTIES TO MANY INDUSTRIES.

J. I. Brittain, consul at Kehl, reports that since the month of May the German coal industry has been unable to cope with the demand.

That this inability should manifest itself during the midsummer season is sufficiently extraordinary to deserve notice and to arouse serious apprehensions for the supply of the German market during the coming winter. The coal syndicate announced that, in view of the enormous demand, they would produce their utmost capacity to supply the summer-quarter requirements of close upon 20,000,000 tons. But even the most strenuous efforts have been unable fully to cope with the situation. The most important coal dealers have had to be content with 50 to 70 per cent of their contracts. Manufactories have been seriously interrupted or delayed in consequence of the chronic scarcity of coal and coke. The Phoenix foundries at Borbeck have been unable to light their new furnaces because no coke coal was to be obtained. Similarly, the Huestener works have been compelled to look to collieries outside the syndicate in order to maintain their output. In view of these conditions the approach of the autumn, with its widespread demands upon the industry, is awaited with grave concern.

The greatest cause of the scarcity is the extraordinary activity in the iron and steel industry. For the first half of 1906 nearly 700,000 more cars of coal, coke, and patent fuel were delivered by the syndicate than during the corresponding period of last year, and the daily dispatch of cars has frequently exceeded 21,000 in number. The Prussian State Railway authorities have been severely criticised in consequence of the shortage of railway cars. Thus, during June, although 221,991 more cars were available than in June, 1905, the shortage amounted to nearly 1,000 cars a day. But, on the other hand, it is questioned whether, even with this shortage made good, it would have been possible to satisfy the demand. The marked scarcity of cars at this time of the year is all the more disquieting, since the farmers will shortly be drawing heavily upon all available railway rolling stock to move agricultural produce.

MINES CLOSED FOR LACK OF TRANSPORTATION.

The result of this deficit in the number of cars supplied has been that in several collieries the miners have been compelled temporarily to stop work, a measure which in these days of high wages is a costly matter. A more subtle cause of the scarcity of coal is found in the efforts of the State railways to replenish their stocks before the approach of winter. Other large industrial enterprises have also begun to replenish their stocks as far as possible. There is, too, the further consid-

eration that at this season of the year the miners are not inclined to work overtime. Wages, however, are high, and it is anticipated that later in the year the absence of work in various branches of employment will attract additional labor to the mines.

Coal-mining companies' returns for the first half of the year are highly satisfactory, notwithstanding the increase in working expenses. But prospects for the future are not so promising. For one thing, the mines have, in the large majority of cases, already reached the utmost limit of their productive capacity. When the syndicate recently revised its scheme of participation a number of collieries returned their productive capacity at a higher figure than could actually be achieved in order to secure a larger share of the general supply. It now turns out that many of these can not fulfill their engagements, although they have not yet reached the limit of their estimated capacity. These collieries, moreover, have protested against any attempt to throw open the market to competition, with permission to the members of the syndicate to supply as much as they could produce. A further revision of the syndicate's agreement seems imminent, and the existence of the syndicate may be imperiled.

CONDITIONS IN WEIMAR.

TRADE SATISFACTORY IN THAT GERMAN DISTRICT.

Vice-Consul P. Teichmann, of Weimar, says the people of his district were fairly well content with the work of 1905, and the favorable conditions continue. He writes:

The improved condition of the commercial and industrial situation in the Weimar consular district, which ruled during 1905, continue. Especially is this true of the manufactures of iron and steel, but the profits in the last half of 1905 did not correspond to the increased activity. The trade in grain was unfavorably influenced by the Russian political conditions, as consignments from Russia, which, ordinarily supplies the German market with breadstuffs to a great extent, failed to arrive in the usual quantities. Prices rose consequently, but toward the end of the year, owing to the new German tariff, an increase of business took place.

Cotton goods, especially knitted articles, were in great demand. Factories could hardly fill orders. The sales in woolen fancy goods amounted to the average figure, there being great competition in this line in Germany. The manufacturers of ladies' cloaks suffered under the unfavorable summer season, but the beginning of winter made the deficiency good. The constant warm weather in July and August favored the production of flower and vegetable seeds. During the summer large contracts for American dried fruit were made, but the American shipper could not supply the orders owing to the bad crop. Orders for machinery were satisfactory, but the prices charged were not in harmony with the price for raw material and the cost for technical renovation. The china factories, whose specialty is a cheap staple article, were well occupied, though the amount of sales were smaller than during 1904.

The declared exports from the Weimar consular district to the United States for the last six months of 1905 were \$1,001,065, against \$1,021,422 for the same period in 1904, a decrease of \$20,357. The principal articles of export were: China ware, \$284,167; fancy goods

and toys, \$275,228; gloves, \$134,930; minerals, \$80,975; seeds and plants, \$46,482; glassware, \$47,339; dyes, \$26,422; machinery, \$27,660; optical goods, \$12,646; hair, \$14,439; stationery, \$17,856, and cotton, silk, and woolen fabrics, \$24,205.

BREMEN'S LARGE TRADE.

EXPORTS TO THE UNITED STATES INCREASE—COTTON LEADS IN IMPORTS.

Vice-Consul Frederick Hoyeremann, reporting on the commerce of Bremen, Germany, says that the total foreign trade in 1905 amounted to \$622,013,779, of which the imports were \$319,219,629 and the exports \$302,794,150. Of the imports, \$145,292,244 worth were articles for consumption and \$173,927,385 were goods in transit.

The principal articles of import were: Grain, \$20,068,424; tobacco, \$11,759,292; cotton, \$94,797,933; metal, \$15,548,006; wool, \$27,130,580; cotton goods, \$11,759,572; rice, \$4,727,826; metal ware, \$9,351,785; machinery, \$6,755,940; lumber, \$4,626,232; coffee, \$4,454,178, and half wool and cotton goods, \$5,198,615.

The value of the articles of imports from countries competing with the United States and from this country was as follows: Barley—Russia, \$4,697,447; United States, \$497,846. Oats—Russia, \$1,296,144; United States, \$447,712. Maize—United States, \$3,745,398; Argentina, \$758,963. Tobacco—United States, \$2,418,478; all other countries, \$8,001,060. Cotton—United States, \$93,548,811; British India, \$988,930. Machinery—Great Britain, \$449,456; United States, \$3,205,992. Copper and copper wire—United States, \$4,515,746; Australia, \$246,226. Cotton-seed meal—United States, \$1,525,353; all other countries, \$13,506.

Of the total exports (\$302,794,150) from Bremen in 1905 the transit goods amounted to \$173,927,385. The exports during the year to the United States were valued at \$28,516,549, an increase of \$4,057,728 over 1904.

COMPARED WITH ENGLAND.

TEUTONS PASS BRITISH IN MANY LINES OF ACTIVITY.

The comparative figures of an English writer on the German and British nations are forwarded by Consul E. T. Liefeld from Freiburg, and are summarized as follows:

The German population is growing at the rate of over 900,000 per annum, while the British population is increasing by only 400,000 yearly. The Government of the United Kingdom numbered 37,400,000 persons in their islands in 1890 and 43,200,000 in 1905. Germany's gain was much greater, the advance being from 49,400,000 to 60,600,000. Yet, notwithstanding this enormous increase in the number of people for whom work had to be provided, German industry has expanded at such a rate that laborers are scarce. The vitality of the German nation is shown by the increased net surplus of births over deaths per thousand from 11.7 in 1890 to 14.5 in 1904, whereas in England it was 10.7 in 1890 and only 11.7 in 1904.

The gross receipts of the German railways, which, up to the twentieth century, were always well below those of the British, have now risen above them. The aggregate shows \$384,453,500 for the United Kingdom and \$306,589,500 for Germany in 1890, and \$545,048,000 for the United Kingdom and \$549,945,000 for Germany in 1904. The

prosperity of the German railways is shown by the fact that their profits rose from 2.2 per cent in 1890 to 6 per cent in 1904, whereas for fifteen years the ordinary stock of British railways has steadily declined, the fall having been from 4.8 in 1890 to 3.9 in 1904, when all allowance is made for "watered stock." Between 1890 and 1904 8,000 miles of railway were built in Germany. In the same period England built only 2,400 miles of line.

In coal production German industry is fast overtaking the British. The figures for coal mined in the respective countries show 154,000,000 tons for the United Kingdom, and 89,000,000 for Germany in 1890; and 239,000,000 tons for the United Kingdom and 173,000,000 for Germany in 1905. These figures are still more significant when it is remembered that in England more coal is used by the mercantile marine and burned in houses than in Germany.

In the manufacture of iron, where for a century England held the primacy, Germany has forged well ahead. England produced in 1890 3,031,000 tons; Germany, 4,658,000 tons. In 1905 England produced 9,746,000 tons; Germany, 10,875,000 tons. With steel it is even worse for Great Britain.

In wealth Germany has rapidly advanced, as shown by the increased deposits in the Prussian Savings Bank, which rose from \$798,106,000 fifteen years ago to \$1,888,202,000 last year, against the advance in England from \$540,181,500 to \$973,300,000. Those paying the Prussian income tax have risen from 8 per cent of the population in 1890 to 12 per cent in 1905, showing 4,390,000 people with large incomes in Prussia alone. Another sign of Germany's growing wealth is that the new issues of capital in the past seven years were \$4,136,525,000 against \$4,623,175,000 in England.

MUNICH'S COMMERCE.

TOURIST TRAFFIC BRINGS GOOD REVENUE.

Consul W. F. Wright, of Munich, indicates that the prosperity of that section of Germany is partly dependent upon the tourists who bring to Munich alone half a million dollars annually. He writes:

The number of foreign tourists visiting Munich increases yearly, and it is estimated that in 1905 between 10,000 and 15,000 Americans alone visited this center, a large number of whom witnessed the quasi passion play at Oberammergau. This tourist revenue feature of the Munich budget is by no means to be despised. The following excerpt from the list of declared exports from this consular district to the United States gives the principal articles for the last half of 1905 as compared with a like period in 1904:

Articles.	1904.	1905.	Articles.	1904.	1905.
Artificial flowers	\$14,179	\$11,569	Leather gloves.....	\$70,035	\$136,014
Beer in casks.....	46,991	46,046	Metal paper.....	15,146	18,059
Chromos.....	45,182	51,353	Oil paintings.....	83,900	117,344
Furniture	10,559	7,954	Paintings on glass	a 1,387	10,663
Household goods.....	a 5,750	15,600	Skins	4,278	49,287
Lithographic prints	a 1,609	11,661	Stained glass windows.....	26,553	16,588

a Three months ending December 31.

An industry which is making rapid strides in this district is the manufacture of rubber and asbestos, and Munich has become a center

for the finished product, such as tires, rubber shoes, etc. While the Bavarian industries have had larger protection, the actual profits because of keen competition have been barely larger than those of former years.

COMMERCE AT LEIPZIG FAIR.

Consul S. P. Warner writes that the Leipzig Chamber of Commerce prepares and publishes annually official lists of the firms represented as buyers or as sellers at the Leipzig spring and fall wholesale fairs.

At the Leipzig fall fair of 1906, the number of firms represented as buyers was 9,886, as against 9,105 in 1905 and 7,534 in 1903; an increase of over 31 per cent during the past three years. The United States and Canada were represented by 114 buyers, while Latin America, Asia, and Europe were also well represented. The official list of sellers this year shows that 3,275 firms had exhibits, as against 3,101 in 1905. The countries represented, and the number of firms from each, were as follows: German Empire, 2,961; Austria-Hungary, 228; France, 40; Great Britain, 13; Netherlands, 13; Switzerland, 6; Italy, 5; Belgium, 4; Denmark, 2; Sweden, 2, and the United States, 1.

RUSSIA.

COMMERCE OF ODESSA.

FOREIGN TRADE HANDICAPPED BY IMPORT DUTIES.

Vice-Consul A. W. Smith, of Odessa, reporting on trade conditions in southern Russia, calls attention to the fact that certain European countries succeed in getting a fair share of trade, notwithstanding the high duties levied upon imports. He writes:

As regards the articles of import into Odessa, all those that are bulky come, as a rule, direct from their country of origin. Of coal there was 27,000 tons in stock at the beginning of 1905, and prices ranged from \$3.75 to \$4 per ton. As the stock decreased, prices advanced to \$5.50 per ton. Owing to the railroad and navigation strikes and the troubles in the coal-mining districts, permission was given by the Government to the southwestern railroads to import 100,000 tons of coal free of duty, which is \$1.75 per ton. In the imports of fire bricks, roofing tiles, and fire clay there has been a steady decrease during the last three or four years, due to the inactivity in the building line. Such articles as haberdashery, wearing apparel, boots and shoes, etc., that are sold in south Russia are principally of Russian manufacture, yet England, France, Germany, and Austria-Hungary manage to supply considerable quantities in spite of the heavy customs duty. There is danger of a decrease in the imports of gold and silver ware. This may be due to the improvements in the articles produced in Moscow and their comparative cheapness. Owing to the advance made in the American bicycles their imports are likely to decrease. The Russians prefer a cheap, even if short-lived, machine. Motors are imported from France and the United States.

PRINCIPAL IMPORTS.

The principal articles of import into Odessa during the year 1905 were as follows: Fruits and nuts, 35,793; manufactures of iron and

steel, including agricultural machinery, 16,476; cotton, 21,221; jute, 6,595; lead, 4,352; fire bricks and tiles, 16,358; tan bark, 8,828; and copra, 10,329; 73,993 bottles of wine and 20,200 casks of rum. The chief exports from Odessa, during 1905, were: Breadstuffs, 1,750,618 tons; wood, 180,363 tons; rape seed, 8,167 tons; wool, 1,837 tons, and salt fish, 5,061 tons. The exports also included 32,318 head of sheep and lambs, and 1,667 head of cattle. Besides the merchandise shipped from Odessa, there was also exported from Nikolaiev, in 1905, breadstuffs amounting to 1,565,452 tons.

COASTING TRADE.

SUBSIDIZED SHIPPING SUPPORTED BY ADDITIONAL PRIVILEGES.

Mr. Smith commenting on the coasting trade of Russia and the regulations by which it is governed, points to the fact that even the far-off waters of the White Sea, the Baltic, and North Sea, by which ships from Riga, Reval, etc., have to reach it, is regarded as part of the Russian coast. He writes:

It is perhaps generally known that all the so-called coasting trade of the Russian Empire is by law reserved for Russian shipping. But it is not so well known that such is not only the case for vessels going from one Baltic port to another, or from one Black Sea port to another, but is the case for those navigating between the Black Sea, the Baltic, and the White Sea. Russian shipping, however, not being as efficient as foreign shipping is often unable to cope with the cargoes to be carried, and then foreign shipping is, by special license, allowed to take part in the "long distance coasting trade." This shows how great are the endeavors of the Russian Government to develop its shipping. An effort is about to be made to set a small fleet of shallow-draft craft to work on the river Pruth. This river is an affluent of the Danube, and separates the Russian province Bessarabia from Roumania. During the spring and autumn it is navigable for several hundred miles. All the shipping, up to the present time, has been in Roumanian hands, with the result that grain grown in the Russian province of Bessarabia went to Roumania for shipment, thence in ocean-going vessels.

The efforts to gain a firm footing for Russian shipping and commerce in the Persian Gulf are maintained with vigor. The Russian Steam Navigation and Trading Company, whose steamers run on the gulf line, realize a clear profit of \$10,300 on each trip besides a government subsidy of \$25,500, or a total of \$36,050.

FINLAND.

LARGE INCREASE IN EXPORTS—LUMBER THE CHIEF INDUSTRY.

Vice-Consul Victor Ek, of Helsingfors, reports that in spite of unfavorable influences which Finland has suffered, it has been able to demonstrate to its foreign creditors the sound basis upon which its commercial transactions are carried on, and that commercial activity was noticeable on every hand. In regard to the foreign trade of Finland, Mr. Ek says:

The total foreign commerce in 1905 amounted to \$98,584,400, of which the imports were valued at \$51,724,000 and the exports at

\$46,860,400. The increase in imports over 1904 amounted to \$173,700 and the gain in exports was \$5,211,386. Breadstuffs constituted the principal articles of import, amounting to 796,618,000 pounds, divided as follows:

Rye flour, 325,600,000 pounds; corn, 157,750,000 pounds; rye, 124,520,000 pounds; wheat flour, 155,320,000 pounds; and all other grain, etc., 33,428,000 pounds. Of the wheat flour imported, Russia contributed 74,580,000 pounds, Germany 44,000,000 pounds, Belgium 12,420,000 pounds, Denmark 10,560,000 pounds, Great Britain 7,480,000 pounds, and all other countries 6,280,000 pounds. Most of the wheat flour imported from Germany, Great Britain, and Denmark was of American origin.

The greatest factor in the Finnish export trade was that of lumber, the foreign sales of which in 1905 were valued at \$23,989,900, an increase of \$656,200 over 1904. An export duty of 8 cents per cubic meter has been put on pit props and pulp wood. The export value of paper and wood pulp was \$6,735,700. Among the other exports were butter, the quantity of which was 34,980,000 pounds, and cattle, meat, milk, and cream valued at \$8,009,800.

MARKET FOR ADDING MACHINES.

Consul Alexander Heingartner, of Riga, calls the attention of American manufacturers to the possibility of a market in Russia for adding machines.

Offices of every description, and all retail stores, invariably use the ancient abacus in their daily business transactions. The abacus is an oblong frame across which are stretched several wires, each supplied with ten balls. The balls on the under wire represent units, those on the next above it tens, and so on to hundreds, thousands, etc. As this contrivance is used for the simplest transactions it is very probable that with the proper effort—such as the cash-register manufacturers employ—a cheap automatic adding machine would find a large market in Russia. [The names of parties in Riga who might be interested in the sale of such machines are on file for reference at the Bureau of Manufactures.]

BELGIUM.

INDUSTRIES OF KINGDOM.

ACTIVITY IN BASKETS, BUTTONS, MATCHES, PAPER, AND GREASES.

Various industries of Belgium are reported on by Consul J. C. McNally, of Liege, as follows:

The basket-making industry is not a large one, but is growing. Rattan, bamboo, rush, and straw plaiting are imported from China, Japan, and India, and the osiers are either native or imported from the Netherlands. The basket work in Belgium, both rough and fine, is done entirely by hand and includes all the articles in use. The annual basket production is valued at about \$1,500,000.

The button industry has not prospered as well as many others in Belgium, but has steadily maintained its regular production, valued at about \$500,000. This includes bone, corozzo, horn, and cloth buttons,

for clothing, metallic, ordinary and fine, and all kinds of buttons for gloves.

The match industry of Belgium is considered in a satisfactory condition. About 20 factories are engaged, some making phosphoric, others Swedish, only one producing the wax match. The aspen wood from which the sticks are manufactured is imported from Russia, which also sends in sticks already prepared. The various kinds manufactured are Swedish, with brown heads, red heads, and yellow and red sticks; the English, treated with paraffin, denominated "crackers;" ordinary phosphoric and the German phosphoric, with a round stick and blue head. The production in boxes is estimated at about 6,000,000 gross, over four-fifths of which are exported.

GREASE, OILS, CANDLES, AND PAPER.

Belgium being an industrial country, the manufacture of grease and oils for industrial purposes has increased. In addition to the domestic raw materials great quantities are imported. However, the local manufactories can not supply the demands and much is imported. The Belgian candle is growing in favor yearly and the production keeps abreast with the demand, which is now considerable. The importation in 1905 amounted to \$80,259 and the exportation to \$655,663, the quantities being 896,951 and 7,340,014 pounds, respectively.

The paper industry in Belgium is sharing the universal trade expansion and the products are sent to all parts of the world. A great part of the raw materials required in the manufacture are found in Belgium, such as linen and cotton rags, linen waste, cords and threads, straw of rye, wheat, oats, barley, etc. Alfa grass and natural woods already in pulp form are imported from the United States, Canada, and the north of Europe. The works are supplied with up-to-date machinery, and very little paper is now made by hand.

The production comes under the following heads: Packing, comprising the straw of different colors, paper for newspapers, ordinary paper, semifine and fine papers, and special papers, such as vegetable or parchment paper, gelatin paper, art paper, cigarette paper, and duplex paper; also enameled and colored, wall, and photographic papers. The gray card and pasteboard are specially made in Belgium. The declared value of imports of paper for 1905 was \$1,318,030, and of exports \$4,632,112.

SUCCESSFUL METHODS OF BRIQUETTE MANUFACTURE.

A system for compressing coal dust into briquettes and oval forms is successfully dealing with the large masses of coal dust of Belgium's mines and sheds.

The briquette industry of Liege has become important, the exportation reaching almost all the coal-consuming countries of the world, amounting for the first seven months of the present year to 253,911 tons, of which France received 110,036, United States 46,700, and Germany 32,514. In 1905 the Belgian State Railways consumed alone about 250,000 tons. The domestic use of briquettes is increasing yearly, many persons using them for kitchen stoves as well as for furnaces.

Parties in the United States who possess large masses of coal dust might find it well worth while to look into the methods for briquette making that prevail in Liege and other parts of Belgium. Even if a

system has been working successfully a better system may be built up by combining the best in two or more systems. The Liege engines and machinery for the presswork is said to be among the best built. Consul McNally sent some descriptions of engines with photographs. These are on file in the Bureau of Manufactures, where they may be examined by interested parties.

CHEMICAL MANURES.

The chemical manure industry of Belgium is in a flourishing condition, and the products are shipped throughout the world.

There are about 140 factories at present producing ammonium sulphate and chloride, and particularly superphosphate, etc. From the Liege district alone the exportation to the United States was nearly \$60,000 last year. In the various gelatine factories the bone phosphate is produced. Basic slag is a by-product of smelting under the Thomas-Gilchrist process, which when pulverized is sold as a neutral phosphate manure. The following statistics in round numbers will show the world's production and value of the manures for 1904, which are the last available statistics:

Commodities.	Production.	Value.
	<i>Tons.</i>	
Superphosphate	6,000,000	\$58,000,000
Nitrate of soda and ammonium sulphate.....	1,500,000	58,000,000
Potash salts.....	700,000	13,500,000

DENMARK.

COUNTRY'S FOREIGN TRADE.

STATISTICS SHOW DECREASED EXPORTS—INCREASED IMPORTS.

Vice-Consul-General Victor Juhler writes from Copenhagen that according to the report of the Danish statistical bureau for the quarter ending June 30 the decrease, which began some time ago, in the export of agricultural products has continued throughout the above-mentioned quarter.

This is especially the case with the export of live animals and food products of animal origin. The export of horses amounted to 5,500 head as compared with 7,500 in the same quarter last year, and there was a decrease of 11,000 head in the export of oxen and cows. The export of bacon amounted to 42,200,000 Danish pounds (each equal to 1.102 pounds American) as against 43,200,000 pounds during the same period last year; and the butter export decreased more than 3,000,000 pounds, while, on the other hand, the export of milk and cream increased 2,000,000 pounds. There was a large decrease in the export of eggs.

At the same time there was a decided increase in the import of cereals and feeding stuff. The import of unground corn amounted to 518,000,000 pounds, while the import during the same quarter last year was only 370,000,000 pounds, and it is especially the import of maize which shows such a large increase, namely, from 176,000,000 to 307,000,000 pounds. The total import for the whole country in

the April quarter is estimated at 3,163,000,000 pounds, as against 2,740,000,000 pounds in the same quarter last year. About one-half of this total import is coal and coke and one-quarter corn and feeding stuff.

The total exports amounted to 710,000,000 pounds, 29,000,000 pounds in advance of the same quarter in 1905, but of this total export 328,000,000 pounds were goods in transit, especially coal and coke.

AUSTRIA-HUNGARY.

ACTIVE INDUSTRIES OF BOHEMIA.

OPENINGS FOR AMERICAN MECHANISMS PRESENTED.

Consul U. J. Ledoux describes present manufacturing conditions in Bohemia in the following letter from Prague:

The Austrian production of china and porcelain ware is entirely confined to Bohemia. Most of the exports are to the United States and Great Britain. The best of the Bohemian glass-industry customers are in Germany, Great Britain, and the United States. The famous "gablonz goods," consisting of beads, buttons, jewelry, mother-of-pearl goods, imitations of precious stones, ornaments, etc., are exported to all parts of the world, the United States being one of the largest buyers. About one-third of the Austrian paper industry is in Bohemia. The products are of good quality, but there should be a market for the higher grades of American linen and blotting papers. Most of the better qualities of linen paper are now imported from Great Britain.

The machine industry is one of the most developed in Bohemia; there is, however, except of agricultural machinery, comparatively little export. There are great possibilities for the introduction of certain lines of American labor-saving machinery. The Bohemian agricultural machine industry is prosperous and there is a fair export, especially to the Balkan countries and to Russia. Light agricultural machines are imported mainly from the United States and Canada, and thrashing machines and steam plows from Great Britain. American trade in agricultural machinery, particularly in implements, could be considerably increased, for they are generally much superior to the local makes, and enjoy greater popularity than those from Great Britain and Canada. Prague is the seat of one of the greatest locomotive works in Bohemia. The International Sleeping Car Company is one of its largest customers.

METALS IN BOHEMIA.

Bohemia is the only part of the Austrian Empire producing silver, silver ore, and many minor metals, such as tin, bismuthum, antinum, etc. Efforts are being made to reopen the gold mines, which flourished in the middle ages, and it is hoped that with modern machinery they may prove profitable. The total production of gold ore in Bohemia in 1903 was only 2,053 tons, valued at \$19,145. The silver mines of Bohemia supplied Central Europe for many centuries.

The total mileage of Bohemian railways represents 40 per cent of the whole mileage for the Austrian Empire. The natural waterways of Bohemia have a total navigable length of 500 miles by rafts, 220 miles by both raft and vessels, and 119 miles by steamers. The principal natural waterways are the rivers Elbe and Moldau. On the river

Elbe brown coal, sugar, timber, barley, fruits, and flour are exported to Germany. Exports to and imports from trans-Atlantic countries are transported on the Elbe from and to the frontier, through Hamburg, but consist principally of large and bulky shipments. The freight is slow but very cheap. There is presently under construction an elaborately detailed scheme for the connection of the rivers Elbe and Moldau with the Danube. When this will have been carried out Bohemia will be traversed by a magnificent navigable waterway connecting it with the German Ocean and the Black Sea.

ITALY.

TRADE OF VENICE.

IMPORTS FROM THE UNITED STATES INCREASE—DECREASE FROM OTHER COUNTRIES.

Consul Paul Nash furnishes a report on the trade of Venice, which shows a healthy increase in the imports from the United States. He writes:

The total foreign trade of Venice for 1905 amounted to \$139,118,001, a decrease of \$1,551,023 from 1904. The imports were valued at \$75,342,739 and the exports \$63,775,262, a loss of \$5,291,229 in imports, and a gain of \$3,740,207 in exports, compared with 1904. The increase in exports is explained by an increased activity in manufactures, and in the exportation of cereals, cheese, fruit, lumber, fuel, matches, and textiles. The loss in imports was caused by the falling off in candles, cotton, hemp, hides, vegetable oil, paper, petroleum, and textiles.

The principal imports into and exports from Venice in 1905 are shown in the following statement:

Articles.	Imports.	Exports.	Articles.	Imports.	Exports.
Animals for slaughter....	\$2,301,839	\$102,870	Metals, crude and wrought.....	\$4,926,346	\$2,511,647
Cereals.....	11,322,952	9,539,818	Oil, vegetable.....	2,211,843	1,989,073
Cotton.....	6,944,844	5,103,922	Petroleum, etc.....	2,546,432	2,249,944
Drugs.....	1,309,392	975,750	Phosphates, etc.....	1,354,293	1,448,219
Fish.....	1,038,094	522,540	Silk, raw, waste, and cocoons.....	1,269,322	692,638
Fruit.....	1,183,507	772,765	Spirits, wine, beer, and vinegar.....	4,570,278	2,353,585
Fuel.....	4,350,165	2,524,377	Textiles.....	13,165,977	14,391,432
Hemp.....	1,559,980	1,281,813			
Hides and leather.....	1,468,040	1,629,006			
Lumber.....	2,520,889	2,008,642			

It is impossible to calculate the imports from the United States, because of the lack of statistics as to the country of origin of goods reaching Venice overland. From data collected by the chamber of commerce the total importation from the United States by sea amounted in 1905 to \$5,696,047, a gain of \$1,146,507 over the preceding year. This gain may be accounted for by the increased number of vessels reaching Venice from the United States, and by the higher prices paid for all classes of merchandise. Large consignments of goods also reach Venice via Genoa and Trieste. Cotton heads the list of imports with a value of \$2,301,942. Cotton-seed oil valued at \$459,372, phosphates \$300,535, with the lesser items of tobacco,

metals, mineral oils, etc., all of which show a steady growth. The increase in the importation of petroleum from \$871,873 in 1904 to \$1,725,235 in 1905, was due to the trouble in Russia, and in part to the growing use of benzine for generating power.

The exports to the United States show a decrease for 1905 of \$32,571 compared with 1904, the total amounting to \$504,593. For the last six months of 1905 the exports to the United States amounted to \$229,301, and consisted of the following principal articles: Hemp, \$68,644; furniture and carved wood, \$23,586; glycerine, \$23,531; paintings and water colors, \$17,293; glassware, \$11,861; lace, linen, etc., \$11,339; and carved marble and stone, \$9,627.

PETROLEUM WELLS.

VALUABLE CONCESSION—POMISING PRODUCTION.

Consul Nash also writes that the existence of deposits of petroleum of considerable importance in Italy is not generally known, even to the Italians.

As early as 1893 a French company obtained a concession from the Italian Government to explore a certain tract in the Apennines, near Piacenza, and to exploit any deposits of petroleum found there. The success of this company was sufficient to cause the formation of another French syndicate four years ago, and last July these two were absorbed by a Genoese company, with a capital of \$3,000,000. The wells already bored are some 95 in number, of which 70 are practically exhausted. The remaining 25 produced about 13,200,000 pounds of crude oil in 1905, and with the eight wells now boring it is expected that the total production for 1906 will reach over 22,000,000 pounds. The concession of the new company comprises about 11,000 acres, and, as it is said to be all petroleum bearing, a great development of this industry may be expected in the next few years.

The wells, none of which are "gushers," reach a maximum depth of 1,300 feet, and the engineers in charge say that those which are exhausted may be made to yield again by deepening. This has not as yet been undertaken, perhaps because by the terms of the grant it is necessary to bore new wells in order to maintain control of the territory. It is curious to note that a central motor is used to operate, by means of cables, the pumps of the various wells. It is said that in the refining process as carried on here there is a net loss of only 3 per cent. Manufacturers of boring machinery, etc., might do well to investigate the matter further.

AGRICULTURAL PROGRESS.

EFFORTS TO ORGANIZE FARMING POPULATION.

Vice-Consul S. Bernardi, of Florence, reports a movement in Italy to organize its farming population into leagues for self-protecting purposes. He notes other interesting features of Italy's industrial life. He writes:

The organization of farmers and farm laborers into leagues has been carried on in Italy for some years. The membership in 1905 numbered 9,611,004, practically the entire agricultural, forestal, etc., population, of which 91,227 were in the district of Emilia. In the prov-

ince of Ferrara 27.9 per cent of those engaged in farming, either as landowners or peasants, belong to the organization. The wine export is on a steady increase. The exportation of empty flasks to western seaports has caused considerable alarm, as the flasks are intended for manipulated wine, which is designed to injure the home trade. A new item of exportation is nitroglycerine, which is produced in Prato and shipped in metallic barrels to Belgium. There are eight mills in the kingdom manufacturing this explosive; of these, three are in Tuscany. About 2,000 tons are produced annually. An important Tuscan concern, under German management, is that of the mining of lignite. The plant is worked on up-to-date lines, and the mines are provided with all modern conveniences for safety and profitable operation. Connection between the mines and the railway station of San Giovanni Valdarno is effected through a private elevated system 3.1 miles in length. The automobile industry is progressing rapidly in Tuscany and especially in Florence. The "Florentia" automobile factory has recently purchased new machinery for its plants and contemplates a very considerable increase of its working force.

The exports from Florence to the United States in 1905 amounted to \$1,570,058, an increase of \$120,421 over 1904. The principal articles were: Straw braid, \$551,161; straw hats, \$364,204; skins and hides, \$107,482; marble statuary, \$98,371; alabaster goods, \$73,158; oil paintings, \$70,909; and porcelain, \$26,270.

SWITZERLAND.

PROGRESS IN FOREIGN TRADE.

LARGE EXCESS OF IMPORTS OVER EXPORTS.

Consul-General T. W. Peters, of St. Gall, transmits the following report on the trade of Switzerland:

Switzerland imported during the calendar year 1905 merchandise valued at \$266,311,363 and exported \$187,080,467 worth, showing an excess of imports amounting to \$79,230,896. The values of the 20 leading articles of import and export are shown in the following statement:

Articles.	Imports.	Exports.	Articles.	Imports.	Exports.
Agricultural.....	\$1,539,966	\$151,481	Glass.....	\$1,227,940	\$58,578
Aluminum.....	99,079	431,090	Iron, and manufactures	15,449,405	2,130,603
Animals.....	11,588,915	2,694,858	of.....	547,090	66,199
Apothecary.....	1,754,854	1,774,963	Lead.....	7,468,076	1,760,535
Chemicals.....	6,065,359	1,996,097	Leather, boots and shoes.	8,961,955	11,812,106
Colors.....	1,461,753	3,962,623	Machines and vehicles...	17,550,042	1,150,578
Cotton, and manufactures			Mineral products.....	2,586,660	66,241
of.....	18,763,696	35,867,277	Oils and fats.....	2,655,242	859,164
Copper.....	3,912,996	687,630	Paper.....	269,003	23,828,958
Fertilizers.....	2,754,412	981,561	Watches and clocks.....	7,797,043	1,116,177
Food products.....	60,586,720	24,732,044	Wood, manufactures of..		

The trade of Switzerland for the first six months of 1906, according to a report forwarded by Consul H. H. Morgan, of Lucerne, amounted to \$226,906,938; imports, \$128,043,161; exports, \$98,863,777. The

trade of the Republic with the United States for this period shows an increase of \$458,854 in imports and \$909,208 in exports, the following being the leading articles:

Articles.	Imports.	Exports.	Articles.	Imports.	Exports.
Chemicals.....	\$116,079	\$74,912	Minerals, oil, etc.....	\$563,902	\$183,691
Clothing		215,811	Oil and fats	200,943	
Colors	2,703	407,014	Silk	3,638	2,061,379
Cotton.....	2,482,583	6,391,318	Watches and clocks.....	61,043	736,553
Foodstuffs	1,320,425	999,538	All other articles.....	160,538	86,222
Leather and shoes.....	701,834	59,830			
Machines, etc.....	116,079	110,287	Total.....	6,045,843	11,371,643
Metals.....	314,076	45,088			

GREECE.

FOREIGN COMMERCE.

DECREASED EXPORTS—INCREASED IMPORTS.

Consul-General George Horton transmits from Athens the following report on the foreign trade of Greece:

The imports into Greece during 1905 amounted to \$25,740,178, a gain over 1904 of \$5,279,615. The exports show a falling off from \$16,613,780 to \$16,267,597 in 1905. The principal articles of import were agricultural products (principally wheat), valued at \$8,522,080; cotton, wool, and other fabrics, \$4,159,656; forest products, \$2,344,587; metals and raw minerals, \$2,189,741; drugs and chemicals, \$1,308,504; manufactures of metals and minerals, \$1,533,186; livestock, \$1,050,618; fish, \$1,287,074; and animal products, \$1,011,915. The chief items of export consisted of agricultural products valued at \$8,910,580; raw metals and minerals, \$2,937,266; wine and spirits, \$1,381,805; animal products, \$709,452; oil and oil substances, \$700,511; manufactures of metals and minerals, \$516,408, and forest products, \$516,480.

The values of Greek imports and exports, by countries, are shown in the following statement, the figures being from the latest official sources:

Countries.	1904.		Countries.	1904.	
	Imports.	Exports.		Imports.	Exports.
United States.....	\$292,790	\$809,771	Italy	\$1,352,084	\$707,001
Great Britain.....	5,757,603	4,064,446	Belgium	419,901	1,587,608
Russia.....	5,234,109	519,276	Roumania	425,124	330,437
Austria-Hungary.....	3,887,775	2,036,222	Holland.....	225,288	1,167,059
France	1,970,081	1,664,406	Other countries.....	217,251	1,202,213
Turkey	3,154,519	1,270,047			
Germany.....	2,524,038	1,335,296	Total.....	20,460,563	16,613,780

The imports from the United States in 1904 were only a little more than half as much as in 1903. The declared exports from Athens and the agency of Piræus to the United States during the last six months of 1905 amounted to \$130,789, an increase of \$46,448 over the corresponding period of 1904. The principal articles consisted of sheep and goat skins, valued at \$25,729; cheese, \$23,623; olive oil, \$18,550; marble, \$14,278; cognac brandy, \$7,079, and sponges, \$6,420.

According to the official returns of the United States, the exports to Greece in the fiscal year 1905 were in value \$181,970 and in 1906 \$239,726, in each case less than in 1904. The imports from Greece were in value \$1,270,792 in 1905 and \$2,032,408 in 1906.

PATRAS.

PORT'S FOREIGN COMMERCE.

Consul J. V. Long writes from Patras:

The imports into Patras for the last six months of 1905 amounted to \$1,282,021, and the exports therefrom \$2,617,784. The principal countries from which the imports were drawn and their values were, England, \$380,497; Russia, \$370,127; Austria, \$158,435; Bulgaria, \$136,199, and Germany, \$55,291. The principal articles of import consisted of provisions, \$544,570; textiles, \$294,830; wrought and raw metal, \$86,553, and fish and preserves, \$70,056. Of the exports England took \$1,424,578 worth; Germany, \$466,066; United States, \$322,880; Holland, \$160,184, and Australia, \$136,088; the remainder being distributed among other countries. The chief articles of export were, currants, \$2,550,609, and wine, \$52,758. The imports into Corfu, an agency of Patras, during 1905 amounted to \$710,597, and the exports therefrom \$156,228.

ROUMANIA.

DANUBE RIVER TRADE.

NAVIGATION RETURNS FOR LAST YEAR—GRAIN MOVEMENTS.

Consul-General Montgomery Schuyler, jr., writes from Bucharest that during the year 1905 there were recorded 1,109 vessels, with a tonnage of 1,756,000, upon the Danube.

Of these 950 were steam and 159 sailing vessels; 352 steamers came under British registration, and 129 sailing vessels were Turkish; 25 vessels were Roumanian. The average tonnage was 1,584, only 12 per cent of the vessels being more than 3,000 tons. The tonnage of the principal nations was as follows: England, 705,000; Greece, 404,000; Austria, 196,000; Italy, 123,000; Turkey, 55,000; Holland, 50,000; Hungary, 48,000; France, 42,000; Germany, 35,000, and Russia, 21,000.

The amount of grain transported was: Wheat, 8,026,000 bushels; barley, 1,666,500 bushels; rye, 1,223,300 bushels; rape, 788,000 bushels; corn, 515,300 bushels, or a total of 12,219,300 bushels. The greatest grain exportation was by the port of Soulina, 6,454,500 bushels. The port of Braila was second, with 4,853,000 bushels. The grain exported by way of the Danube was sent to Bulgaria, Holland, Italy, Spain, Germany, France, and Gibraltar. The wood and other products exported from Roumania amounted to 242½ tons. Wood is exported through Galatz, and petroleum and benzine by Braila.

SPAIN.**SHIPPING INFORMATION.****ADMINISTRATIVE FEATURES OF NEW TARIFF.**

Consul-General B. H. Ridgely, of Barcelona, furnishes the following translation of certain administrative features of the new Spanish tariff, which will be of interest to American exporters, particularly in view of the fact that the United States is now a treaty nation with Spain. Regulation No. 10 reads:

For the purpose of obtaining the benefits of the conditions granted by the different treaties of commerce now in force, the different nations will be considered as divided into four groups:

First. Countries having treaties at present in force—Denmark, Norway, Holland and its colonies, Portugal, and Sweden. Second. Countries enjoying all customs concessions (excepting those given to Portugal)—Germany, Annam, Austria-Hungary, Belgium, Bolivia, Costa Rica, Egypt, Chile, China, Great Britain and her colonies, Greece, Guatemala, Japan, Luxemburg, Mexico, Nicaragua, Paraguay, Persia, Peru, Argentine Republic, Russia, Salvador, Siam, Switzerland, Tunis, Turkey, the United States of America, Uruguay, and Venezuela. Third. Countries entitled to the second column of the tariff—Colombia and Ecuador. Fourth. Countries subject to the first column of the tariff—All those not mentioned among the above.

I. The advantages mentioned in the treaty with Portugal will not be granted to any other country, but those granted by agreement with the countries mentioned in the first group are applicable to the products and manufactures of Portugal. II. The concessions granted to Denmark, Norway, Holland, and Sweden will be applicable to each one of those countries, and also to all those countries included in the second group. III. In order that goods imported from countries specified in groups 1, 2, and 3 may obtain the lowest scale of duties, they must be accompanied by a certificate of origin drawn up with the formalities required by the regulations. IV. Goods shipped to Spain from a treaty country, and provided with the necessary certificate of origin, which may have to pass through another treaty country in transit, need not obtain any certificate of transit. When, however, they pass through a country having no treaty with Spain such transit certificate will be necessary.

CERTIFICATES OF ORIGIN.

Certificates of origin will be drawn up according to the following rules: The certificate will be an official statement made to or before the local authorities of the place of origin or shipment of the goods, stating that they have been manufactured or produced in the country, and it will also contain the particulars hereinafter mentioned. Certificates will be issued by such local authorities as each country may indicate for the purpose, and the custom-house will be informed thereof.

The Spanish chambers of commerce legally constituted abroad, as also our career consuls and vice-consuls, may issue certificates of origin. Honorary consuls, vice-consuls, and consular agents will only issue these documents after they have first obtained special authority from each producer, manufacturer, or merchant granted by his chief officer. Certificates will be given either upon the declaration of the producer or manufacturer of the goods, or his agent, stating that they are of his manufacture, or upon the statement of a merchant presenting two invoices of the goods; in this case it is not necessary for the name of the manufacturer or producer to be stated. The certificate will be issued in accordance with the laws of each country, either upon a signed statement presented to the local authorities by the person applying for the certificate or by verbal statement.

CERTIFICATES OF ORIGIN MAY BE DRAWN UP EITHER IN FRENCH OR SPANISH.

When drawn up in any other language they should be translated at the option of the merchants, either by the sworn interpreters, by a broker, or by the board of agriculture, industry, and commerce of the locality, or by the consuls of the country from which the goods have been received. The translation of certificates of origin made by the Spanish Chamber of Commerce in London would be accepted as valid. A 2-peseta stamp will be charged for each certificate.

When certificates of origin are drawn up in the language of the country of origin and also in Spanish, the Spanish translation will not be accepted, and a fresh translation will be made.

Small quantities of merchandise coming in parcels are subject to the general import regulations. Goods by parcels-post will be charged duty according to the second column of the tariff, when they have been sent from a treaty country, unless an examination of the goods should require another duty to be charged. The same rule applies to goods sent in parcels called "paquetes comerciales" weighing less than 5 kilograms each. If the shipment comprises several parcels, whose total weight does not exceed 25 kilograms, a certificate of origin will not be required, although they be all sent from the same place from one sender to the same consignee. In no case will the frontier boundary be considered as the place of origin.

TRANSIT CERTIFICATES.

Transit certificates will be drawn up in similar manner to certificates of origin, but they must state the route by which the goods will be sent; if by land, the frontier station where the goods will enter Spain must be mentioned. When a different weight of goods is found on arrival, as compared with the weight mentioned on the certificate if such a difference does not exceed 20 per cent of the weight specified on the certificate the certificate will be accepted, but should the difference exceed 20 per cent the certificate will be canceled and the goods will be assessed according to the first column of the tariff.

COMMERCE OF SEVILLE.

NEW RAILROAD HELPS THE MINING INDUSTRY.

Consul R. M. Bartleman, formerly of Seville, reports conditions in that district during 1905. He calls attention to the general movement of trade and points to the fact that Spain is building railroads and exploiting her mines. He writes:

The total imports into and the exports from Seville in 1905 amounted to 858,415 tons, an increase of 68,415 tons over 1904. The exports amounted to 570,052 tons. The principal imports, in tons, were: Breadstuffs, 52,634; coal, 82,690; iron and steel, 19,904; lumber, 18,494; general merchandise, 79,490; petroleum, 6,063; fish, 1,836; rice, 3,826; textiles, 4,849; fertilizers, 7,116; soda, 3,922, and provisions, 4,754. The exports, in tons, consisted of the following principal articles: Cork, 10,609; iron ore, 337,255; pig lead, 45,294; olive oil, 23,121; oranges, 10,892; soap, 6,941; wine, 4,544; general merchandise, 18,606; wool, 1,959; crockery, 1,864; copper and other ore, 89,977; olives, 14,643, and provisions, 1,432. The principal imports, in tons, from the United States were: Breadstuffs, 176; manufactures of iron and steel, 27; machinery and parts, 245; clay tiles and pipes, 30; lubricating oil, 118; crude petroleum, 3,854; stone and building material, 74; sulphate of copper, 34, and vegetable oil, 11.

The railway from Seville to Cala has recently been completed, enabling the exploitation of many new mines. A shipment of ore to the United States consisted of 3,146 tons crude iron pyrites. A large cork factory is being built by an American firm at Seville, the machinery having been purchased in the United States.

TURKEY.

PHARMACEUTICAL SUPPLIES.

AMERICAN GOODS GENERAL FAVORITES WITH PHYSICIANS IN HARPUT.

Consul E. E. Young reports that American pharmaceutical products might easily make their way in the markets in and near Harput, Turkey, since the influence of the American missionary schools is such as to warrant this belief. He writes:

The leading physicians are Armenians, graduates of the American missionary schools and colleges or of some reputable medical college. Each important center in this region is occupied by one or more of these physicians. All of them are acquainted with and use American pharmaceutical products. The largest and best equipped pharmacy here is the Euphrates pharmacy at Harput, which is owned and conducted by the American colony. A consulting room has been fitted up in connection with the pharmacy for the use of the city physicians. Catalogues of many American manufacturers of surgical instruments, drugs, and pharmaceutical goods are kept on file in this room, and the druggist in attendance is charged with the duty of calling them to the attention of the visiting physicians and druggists. American firms dealing in these supplies are requested to send their catalogues to the American consul, Harput, Turkey, for file in the Euphrates pharmacy and other similar institutions.

SWEDEN.

TRADE OPPORTUNITIES.

Consul R. S. S. Bergh, of Gothenburg, writes that there are several "techno-chemical factories" producing shoe dressings in his district. American, English, and German goods in these classes are sold in Sweden. The consul sends the names of dealers. These are on file in the Bureau of Manufactures. Continuing, the consul says it is possible that the better grades of American ready-made clothing and shoes would sell in his district. He gives the names of dealers. These, too, are on file and may be obtained by applying to the Bureau of Manufactures. The import duties on shoe blackings and dressings is 20 ore, or about 2.4 cents per pound. The weight of the bottles or tins is included in the dutiable weight.

TRAFFIC AT THE CITY OF GOTHENBURG.

Gothenburg harbor is open for navigation all the year, but there is no direct or regular steamship connection with the United States. Large quantities of American goods arrive at Gothenburg from the ports of Hull, England, Copenhagen, and Hamburg, and some via London and other places. The principal articles consist of cotton, sirup, pork, lard, lubricating oils, petroleum and its manufactures, cattle feed, some flour, preserves, labor-saving machinery, tools and implements, tallow, tobacco, a few boats, motor launches, hardwood boards and veneers, leather, typewriting and adding machines, graphophones, stationery, copying machines, watches, shoe polish, etc.

[Mr. Bergh also gives names and addresses of steamship agents maintaining connections with the principal ports of Europe, and coastwise and canal steamer lines which are used for the receipt and distribution of merchandise. These addresses are on file at the Bureau of Manufactures.]

AMERICA.

SOUTH AMERICA.

BRAZIL.

EFFORT TO FIX A STABLE MONETARY UNIT.

Mr. Lloyd Griscom, ambassador to Brazil, sends from Petropolis a copy of a bill introduced in the Brazilian Chamber of Deputies to establish a conversion office for the purpose of receiving gold coin of legal tender, either British, German, French, Italian, or American, in exchange for notes convertible to the bearer, to be issued at the rate of 15 pence per milreis. Mr. Griscom writes:

The idea of fixing the exchange has for a long time been widely discussed and actively backed by the coffee planters. The plan for establishing a conversion office was originally linked with that of the valorization of coffee, both projects being considered necessary by the planters, the former for increasing the selling value of their product and the latter to stop the constant rise in exchange, which was increasing their running expenses, which are paid in paper. It was at first proposed to present the two projects in a single bill, and it was only on account of the great opposition to the fixing of exchange and the doubt as to whether such a measure would ever become law that the two projects were presented separately. The present bill has now the backing of a majority of the Sao Paulo members as well as the lukewarm support of the representatives of the States of Rio de Janeiro, Minas Geraes, and some of the southern States. The majority of the house committee of finance has approved it.

CHANCES FOR ENACTMENT.

The project is now being discussed daily in the chamber and it is confidently expected that it will pass that house. It is probable that considerable opposition will be met in the senate, but as the incoming administration is supposed to be favorable to the scheme, the chances of its becoming law in its present or modified form are excellent. The present government is opposed to the fixing of exchange, but it has only two more months to run and its present hold over the legislature is very weak. The business interests are divided as to the advisability of fixing the exchange, and in many quarters it is considered doubtful whether the government, by the establishment of a conversion office, will be able to hold exchange at the proposed rate. In the meantime, apprehension as to the outcome of the bill is having a depressing influence on business and many merchants have restricted their affairs until something more definite is known. The rate of exchange, which is practically controlled by the minister of finance, has remained station-

ary for the past two months at about 17 pence to the milreis. The proposed law reads:

The National Congress institutes a conversion office for the purpose of receiving gold coin of legal tender against notes of equal value, payable to bearer, to be issued at the rate of 15 pence per milreis. These notes shall be legal tender and shall be convertible in gold on presentation to the conversion office. The gold received by the conversion office in exchange for the new emission shall be kept in deposit, and may not be utilized for any other purpose whatsoever except the conversion at the fixed rate of exchange of the notes so issued, under the personal responsibility of the staff of the conversion office, and with the guaranty of the national treasury.

Notes once redeemed and paid shall not be put again into circulation, but shall be burned or otherwise destroyed. Until special notes be printed for issue by the conversion office, treasury notes duly signed and containing the necessary statements may be used for this purpose. All payments in gold already decreed or contracted to be effected in gold shall be paid as at present in conformity with the legal par value of 27 pence per milreis, but may also be effected in the notes of the conversion issue at the gold value established by the present law.

Issues by the conversion office shall cease when they reach the sum of 320,000,000 milreis corresponding to the deposit of £20,000,000 sterling maximum, when by special enactment the rate of 15 pence per milreis may be raised. When the £20,000,000 limit has been reached and the rate has been altered as prescribed in this law, the notes issued shall be called in for exchange within period of at least six months, after which they will be exchanged only at a discount of 20 per cent for the first five years, counting from the initial date of exchange, and afterwards shall be prescribed and revert in favor of the guaranty fund instituted in June, 1899.

Coined marks, francs, lire, and dollars, in addition to pounds sterling, shall serve to constitute the reserve (deposit) at the corresponding rate of exchange fixed for the pound sterling. The conversion office shall establish a special account of the notes issued and the gold received, and shall publish monthly a balance sheet of the deposits and issues. The executive shall issue the respective regulations for the organization and administration (management) of the conversion office under the direct superintendence of the minister of finance and on the model of the existing Caixa de Amortisação. Until definite approval of Congress the number, class, attributes, and compensation of the functionaries of this office shall be determined by these same regulations.

For misapplication (descio) of the gold deposits the members of the conversion office shall be liable to the penalties laid down in the penal code, in addition to the personal responsibility.

GOLD BOUGHT BY BROKERS TO SELL TO EMIGRANTS.

Consul-General G. E. Anderson, of Rio de Janeiro, calls attention to the large importations of gold and silver specie by Brazil during the past year, in spite of which there is no gold in circulation in the country.

These heavy importations are made by money exchangers chiefly for supplying laborers with gold, which they use as savings institutions free from the evils of a fluctuating currency, and also for supplying returning emigrants. The vast majority of emigrants to Brazil leave for their native lands just as soon as they amass enough money to answer their needs, and this importation of specie measures the movement of money in such direction. According to the customs returns, the movement of specie in and out of Brazil for the past five years has been as follows, the calculation being based on \$5 to an English pound:

Year.	Imports.	Exports.	Year.	Imports.	Exports.
1901.....	\$6,992,150	\$291,570	1904.....	\$4,024,760	\$44,495
1902.....	5,892,215	159,680	1905.....	14,547,665	53,650
1903.....	4,756,860	512,205			

The Brazilian Review states that the fact that most of the gold imported is taken out of the country again by returning emigrants is generally regarded unfavorably, but concludes that it is better that he should take the gold instead of bills, because in this way a fraction of his savings, represented by the profits on the importation and sale of his gold, is retained. The journal estimates that in this way there has been accumulated during the last few years by the hoarding of laborers probably \$25,000,000 to \$30,000,000. Some Brazilian interests may regard this movement of gold as of little moment in that at most it represents only what ordinarily would pass in the shape of bills of exchange, which in the long run would be charged or credited to Brazil's credit account abroad. The felicitation expressed that some profit on the transaction remains in the country, however, takes on another aspect. The most important phase is that this profit measures to a considerable degree the loss which Brazil suffers upon nearly every business transaction by reason of its depreciated paper currency. This unusually large importation of specie during 1905 represents importations made directly for the transfer of paper milreis into gold money at the high rate of exchange which has been prevailing, and the large increase in the number of people of the emigrant class leaving Brazil for their home lands tells the rest of the story.

REPUBLIC'S COMMERCE.

PROSPECTS NOT LIMITED TO COFFEE AND RUBBER.

Reporting about Brazil's ability to produce various articles of commerce Mr. Anderson submits facts and figures that will create surprise. Hitherto rubber and coffee have been regarded as practically the only products of Brazil worthy of consideration. The Consul-General shows that there are others, if not equally important, too important to be disregarded. He writes:

The fact that Brazil is at the present time exporting little besides rubber and coffee, in any great volume, should not be taken by American business men as indicating the real producing strength of the country under favorable circumstances and conditions. How some trade can and will be developed, when the economic aspect of things in the country is bettered, can be seen from the development of certain industries in the state of Rio de Janeiro. In his recent message to the legislative assembly of this state President Peçanha calls attention to the record in the case of some products. For instance the products mentioned herewith did not appear at all in the export returns of the state in 1903. In 1904 they commenced to be noted, and the exports in 1904 and 1905, with the percentage of increase between the two years, were as follows, expressed in kilos of 2.20 pounds each:

Articles.	1904.	1905.	Increase.
	<i>Kilos.</i>	<i>Kilos.</i>	<i>Per cent.</i>
Monzanite.....	43,360	283,911	547
Cotton.....	200	2,400	1,100
Lard.....	519	20,621	3,872
Fresh meat.....	1,256,563	5,260,130	319
Butter.....	7,756	40,283	419.3
Macaroni.....	1,777	5,330	199.8
Soap.....	91,663	685,583	645.8
Castor-oil seed.....	1,060	30,175	2,746
Mineral-water.....bottles..	62,978	316,116	401.8

In other words, in nine articles of ordinary production there was an average increase of about 1,140 per cent from one year to the next, and it may be added that this increase took place in the face of what, in some respects, were very unfavorable circumstances.

It should be added that conditions of production and distribution in Brazil at the present time are very exceptional and decidedly singular. For instance, in and around the bay of Rio de Janeiro vast swarms of good fish are to be had for the fishing, yet the price of fish in the Rio markets is so high that it is practically prohibitive.

The same may be said not only of other forms of sea food, but of many other things. Such conditions obtain at a time when the wages of labor are very low. In the ordinary course of things the employment of some of the labor, now to be had in Brazil at low rates, in the development of the fisheries, would be a benefit not only to the laborers but to others. What is true of sea food is true of many other things. While cattle are plentiful and cheap and pasturage is to be had almost for the asking milk is very costly; and butter in Rio de Janeiro will average about twice what it does in the United States. The lack of satisfactory transportation in the past has explained many such conditions but in most parts of what may be called the inhabited portions of Brazil, the means of transporting goods of all kinds are very much improved, and in some portions of the country are as good as the situation justifies.

HATS AND CAPS.

OPPORTUNITY FOR THE AMERICAN PRODUCT.

Consul-General Anderson also reports a good chance to get a hold of the Brazilian hat and cap trade, provided American merchants and manufacturers are able and willing to meet Brazilian conditions. The consul-general writes:

In response to an inquiry I have to report that it is possible that American hat and cap manufacturers may be able to get a foothold upon the hat and cap trade of Brazil. The Brazilian people, as a whole, are fond of high-grade headwear and the establishments in Rio de Janeiro handling this class of goods are among the finest shops or stores of the city and will compare favorably with such establishments in any part of the world. In general, American manufacturers will have the same opportunities to get trade in this line that they have anywhere else in competition with the rest of the world. The amount of goods imported must be considerable but the customs classifications are such that it is almost impossible to get at a definite figure. Of the general classification of "hats, all kinds," there was imported in 1904, the last year for which there is published record, a total of about \$320,000 gold, which was a slight increase over the year before. Besides, about \$2,000 worth of skull and other caps and hoods were imported. The duty on all these goods varies and is equal to 50 or 60 per cent ad valorem. Of the amount now and heretofore imported France leads with about 33 per cent; Italy comes next with about 25 per cent; Great Britain follows with about 20 per cent; then Germany comes with about 16 per cent, then Peru with about half of the remainder. There is considerable done in the way of local manufacture, the bulk of the raw materials for which come from Germany.

MUST BE VERY CHEAP TO PAY TARIFF RATES.

Apparently there is practically nothing known here of the cheap cap trade which has been built up in the United States. The head-wear sold in Brazil must be suitable for a tropical climate, and that designed for the cheap trade must be very cheap to be brought within the reach of Brazilian purchasers, and still allow for the exceedingly high tariff charges. For the better grades of hats and caps there must be strictly up-to-date styles. Brazil is within two weeks or less of London and Paris and naturally clothing of all kinds must conform to the ideas brought here by the European steamers every week. There is no part of South America I have heard of which can be considered in any way a dumping ground for clothing or any other goods which are not wanted in the United States or in any other progressive country. Competition in the hat and cap trade, for instance, may almost be said to be the same as competition in this line of business in France, Great Britain, Italy, Germany, and other competing countries, the added element of freight and transportation expenses considered.

Note.—The duty on caps, according to the tariff of Brazil, varies from about 53 cents each (1,300 reis, 35 per cent gold and 65 per cent currency) to 81 cents each (2,000 reis, 35 per cent gold and 65 per cent currency).

[A list of dealers in hats and caps in Rio Janeiro is on file in the Bureau of Manufactures.]

GREAT SOUTHERN CONTINENT.

A STRIKING CONFIRMATION OF A SCIENTIFIC THEORY.

Mr. Anderson reports, furthermore, that the Brazilian movement to find the extent and value of its coal deposits developed considerable scientific information about the Southern Hemisphere, which leads him to write:

Concerning the recent official investigation of Brazilian coal fields, a Rio de Janeiro authority says that "it has furnished further proof of the one-time existence of a great southern continent which included South America, South Africa, and Australia.

"The report of the commission headed by Doctor White, of West Virginia, added largely to the paleontology of the world with new species found in Brazil. There were included among the vegetable fossils collected by the commission three distinct genera and many more new species.

"The reptilian fossil, which was found in the petroleum-bearing black schist at Iraty, in the State of Parana, is of an entirely new genera here, and of which only one other is known, and that existed in South Africa. The *Stereosternum tumidum* Cope of Sao Paulo has been known, but we have now the *Mesosaurus braziliensis* Osborn of the black-schist formation of Parana. The vegetable fossils, as well as this reptile fossil, show that the Permocarboneous formation of the south of Brazil is identical with that of South Africa, the south of India, and Australia, and is a further element of proof of the existence during the Permocarboneous period of the vast continent which Suess, who formulated the hypothesis of its existence, called the continent of Gondwana, and which was composed of South America, South Africa, southern India, Australia, and the Antarctic lands. The

study of the geology and paleontology of Brazil has been so incomplete heretofore that these present discoveries are of rare value."

URUGUAY.

DEVELOPMENT ENTERPRISES.

NEW RIVER STEAMER LINE INTO RICH INTERIOR COUNTRY.

Consul John W. O'Hara describes an important movement Uruguay has undertaken to open up a vast fertile territory to development and trade. He writes from Montevideo:

The important Rio Negro River rises in Brazil and flows across Uruguay, emptying into the Uruguay River about 100 miles north of Buenos Aires and near Fray Bentos, where the extensive Liebig factories are located. This river, which has until recently been but little used, is one of great commercial importance, as it divides this country into two parts almost equal in area, and traverses a portion of the country hitherto almost inaccessible by reason of its lack of commercial communication. The Uruguay Central Railway runs northward from Montevideo, crossing the Rio Negro, and from this point extends to the Brazilian line by two branches.

West of this point the river has been navigated and the country has been thereby provided with a means of transportation in competition with the railroad, and also with additional means of communication with the local and general markets. Two-thirds of the country lies to the east of Paso de los Toros, the point where the railroad crosses the river, and there is no other railroad within 100 miles of the river. Few bridges have been built or highways made, so that for lack of communication with proper markets much of the best land in Uruguay, the eastern and central portion, has been but little developed. The soil is exceedingly fertile and the climate almost tropical. It is said that this section is especially adapted to the raising of a very fine quality of tobacco; also to the growing of oranges, lemons, figs, grapes, and peaches.

MONEY WISELY EXPENDED.

The advantages that the opening of this river to navigation would bring to this country have been long understood, frequently discussed and projected, but not until recently has the enterprise been undertaken. When the general conversion law of January 23, 1906, was passed and an Executive order issued for the application of the balance remaining after providing for the payment of those items for which special provision had been made in the law, the President of the Republic directed that the sum of \$500,000 Uruguayan gold, equal to \$517,000 American gold, be expended for the improvement of the rivers of the country. The idea of the Executive was to open up the new and fertile country, and public attention was at once directed to the Rio Negro. The work was soon put into practical form. Four new river steamers, two for freight and two for passengers, have been purchased; two of them are now in use and the others are being fitted up in the shipyards at Paso de los Toros. The Government launch has explored the river as far east as the mouth of the River Tacuarembó, a distance of some 240 kilometers, or 144 miles. The report of the explorations has been submitted to the President, and is regarded with great satis-

faction. *El Dia*, the official organ of the Government, says in a recent issue, after giving an account of the explorations :

Within a few days the freight steamer *Libertad* will go over the same ground. This has just been fitted up in the shipyards of Paso de los Toros, and, as is well known, is one of the three which the Government has obtained in Europe. Two passenger steamers, which will be named *Paz* (Peace) and *Orden* (Order) have just arrived, destined for the same trade, which will be arranged for public service as soon as possible. They have ample accommodations for first and second class passengers, with dining rooms and kitchens. In all probability one of the steamers mentioned will run westward between Paso de los Toros and Paso de Pereira, and the other eastward as far as possible, perhaps to the confluence of the Rio Tacuarembó. This opening up of communication with the interior is now about to be realized.

The distance to Montevideo from the mouth of the Tacuarembó, by the Rio Negro, is approximately 500 miles, and to Buenos Aires 400 miles. It is the hope of the persons having the improvement in charge to be able, with small expense, to extend the navigation of this river 100 miles farther east, and to bring within easy reach of a convenient market some 6,000,000 acres of fertile lands.

COLOMBIA.

UNDEVELOPED RESOURCES.

PLENTY OF COAL, LUMBER, AND MINERALS—HIGH COST OF LIVING.

Consul-General A. G. Snyder reports from Bogota on a number of subjects, as follows:

Large deposits of coal are found in many parts of Colombia, especially in the surrounding mountains near Bogota. An American syndicate has leased a large tract of land and intends to develop the industry along modern lines.

With modern facilities for easy and quick transportation, there is no other field that offers such inducements to the American lumberman as does Colombia. The country is practically a huge forest in the interior, and contains many varieties of woods of value, such as cedar, carreto, roble, mahogany, campano, and ceiba.

The mineral resources are vast and varied. The most abundant and profitable are gold, silver, iron, copper, salt, platinum, sulphur, etc. Marble, granite, and sandstone are found in large quantities, but, with the exception of sandstone, are very little used. In Choparral and other places large deposits of asphalt are found, which is shipped to the United States for use principally as a base for making varnish.

The financial condition of Colombia has changed very little in the past two years, although various measures have been considered by the Government for putting the country on a gold basis. Paper money continues to be the medium of exchange, and the rate is about 10,000 per cent. Reports are published every month giving the amount of paper money destroyed, but it is being replaced by nothing more substantial than new bills which have no more guaranty than the old ones.

The cost of living at Bogota is higher than in any other place in South America. Butter is quoted as selling (in paper money) at 90 cents a pound; eggs, 5 cents apiece; flour, \$20 a barrel; cigars, 50 cents apiece, and champagnes, \$12 a bottle.

There is little doubt that cotton can be grown successfully in Colombia. Several attempts have been made to interest the natives in its cultivation, but so far without success. A fairly good quality of cotton grows wild, some of the plants reaching a height of 15 to 18 feet.

DUTCH GUIANA.**HOME PRODUCTS AND FOREIGN TRADE.****COMMERCE WITH UNITED STATES IMPROVING—COFFEE AND COCOA.**

Consular Agent W. H. Bradley, of Paramaribo, reports on the trade of Dutch Guiana as follows:

Dutch Guiana's imports in 1905 amounted to \$2,622,923, a decrease of \$336,876 from those of 1904. Holland's share of the imports amounted to \$1,510,994; United States, \$547,082; England, \$198,305; British Guiana, \$174,731, and all other countries, \$191,811. The articles of import in which the United States exceeds all other countries, and their value, were: Flour, \$149,950; provisions, \$144,322; kerosene, \$34,516; fish, \$26,511; lumber, \$14,960; bread and biscuits, \$16,541; and leaf tobacco, \$10,527.

The exports amounted to \$1,773,159, of which Holland took articles valued at \$738,356; United States, \$691,485; Demerara, \$275,980, and all other countries, \$65,475. The principal articles of export to the United States were cocoa, valued at \$310,440, and sugar, \$340,454.

The exports of balata for 1905 amounted to 537,783 pounds, of which 21,790 pounds were imported from French Guiana. During the past year the Colonial Government imposed a tax of five Dutch cents (2 cents American) per 2.2 pounds on balata. The exports to the United States amounted to 26,238 pounds, valued at \$17,842. On account of a disease affecting the coffee trees the production of coffee fell short of that of 1904. The exports amounted to 231,594 pounds, the average price being 18 cents per pound. The cocoa industry showed considerable improvement over 1903. The Krullotin disease has disappeared in many places, and planters have thinned out the shade trees and improved the drainage with the expectation of increasing the crop in the future. The exports amounted to 3,760,021 pounds, of which the United States took more than three-fourths of the whole amount. There was a decrease of more than 10,000 bags in the sugar crop compared with 1904. The exports in 1905 amounted to 18,272,082 pounds.

The production of gold in 1905 amounted to 1,071,316 grammes, an increase of 268,500 grammes over 1904. There was also imported into Dutch Guiana for exportation 241,676 grammes of gold, making the total exports for the year 1,265,161 grammes.

CHILE.
HOW AMERICANS MAY SECURE TRADE.

Consul C. S. Winans, of Iquique, responding to a Cincinnati trade inquiry, writes as follows on how to sell goods in Chile:

The best way to secure Chilean trade in any line is to send experts in the goods to be introduced, to study the conditions and styles used, and then be ready to adapt that line of goods to the needs of the district. Too often American firms are not willing to adapt their styles to the needs of the people, with the result that they do not get the trade. German firms are, as a rule, ready to give the people what they want, while American firms are usually not willing to change their styles; consequently they do not get the trade.

CENTRAL AMERICA.**NEW TREATY OF AMITY AND COMMERCE.**

Mr. William Lawrence Merry, minister to Costa Rica, Nicaragua, and Salvador, under date of October 2, furnished the Department of State with a synopsis of the treaty signed at San José September 20 by commissioners from Guatemala, Honduras, Salvador, and Costa Rica. A number of important provisions are contained in the treaty, a full copy of which has not yet been received. The synopsis furnished by the minister follows:

1. Any differences to be settled "necessarily" by arbitration. Representative of all parties to be sent to Washington and Mexico to obtain the acceptance of the governments there as arbitrators.

2. Salvador, Honduras, and Costa Rica agree that the "Compact of Corinto," signed January 30, 1902, continues binding upon them as well as the "Reglamento" enacted by the tribunal of arbitration at San José, Costa Rica, October 9, 1902.

3. Citizens of the signatory Republics residing therein shall all enjoy the same rights as the natives and shall not be compelled to pay any extraordinary contributions.

4. Citizens of the signatory Republics shall have the right to exercise their professions and legal occupations without interference, and the copyright is extended thereto without restriction.

5. There shall be no duties collected on the importation of the natural products of Guatemala, Honduras, and El Salvador. Foreign products manufactured in any of the three Republics named shall pay 50 per cent of the import duties on similar articles imported from other foreign countries. As exception to the above are named salt, sugar, tobacco, and liquors imported into Guatemala and Salvador. As regards Costa Rica the importation shall be for the present limited to natural products from the other three Republics under the above agreement.

6. The same privileges and protection are extended to the navigation between the four signatory Republics, and the promotion of a more efficient service is promised between Panama and California, Colon and Puerto Barrios, and their coastwise maritime commerce is to be developed.

7. Aid is to be extended, so far as may be practicable, to the building of railroads connecting the signatory Republics, the establishment of new submarine cables and aerial telegraph service.

8. Telegraph rates for any part of Central America (comprising all the five Republics) shall be the same as for their interior telegraphic service.

9. There shall be an entirely free exchange of all publications between the four signatory Republics.

SALVADOR.**UNITED STATES LEADS IN IMPORTS.**

Vice-Consul H. C. Woodsum, of San Salvador, submits the following report on the commerce of Salvador, which shows that the United States for the first time is leading all other nations in the import trade. He says:

The imports into Salvador during 1905 amounted to \$4,341,304, a gain of \$330,928, and the exports to \$5,647,698, a loss of \$987,741 compared with 1904. The increase in imports was largely due to the Government's purchase of large quantities of breadstuffs, because of the failure of Salvador's corn crop. The decrease in exports is attributed to the small production of coffee, which fell in value from \$5,388,280 in 1904 to \$4,366,468 in 1905, a decrease of \$1,021,812. The export of indigo has fallen from \$402,922 in 1902 to \$137,658 in 1905. The exports of rubber increased \$3,094, the values being \$23,845 in 1904 and \$26,845 in 1905. It is estimated that 2,000,000 rubber trees have been planted in Salvador during the past few years, all of which will soon be of producing age.

The United States in 1905 for the first time led all nations in the import trade, the value being \$1,352,627, an increase of \$190,288 over 1904. The increases were in cotton goods, tools and hardware, and machinery. The imports of cotton goods from the United States rose from \$303,903 in 1904 to \$434,550 in 1905; machinery from \$34,697 to \$80,992; and tools and hardware, from \$33,827 to \$60,265. The percentage of imports from all countries was as follows: England, 30; France, 8; Germany, 11; Italy, 2; Spain, 1; United States, 31; all other countries, 17. The exports to the United States showed an increase of \$62,597 over 1904. The percentages of exports were: To England, 15; France, 29; Germany, 18; Italy, 10; Spain, 1; United States, 22, and all other nations, 5.

WEST INDIES.

HAITI.

AMERICAN BONDHOLDERS WILL RECEIVE BACK INTEREST.

Minister H. W. Furniss sends from Port au Prince the translation of a new Haitien law which makes provision for the payment of that part of the interest due on the various "internal bonds," the interest on which was scaled down by a law effective July 1, 1905. This is of particular interest to Americans, as not only is the American legation there trustee for \$70,200 of these bonds, but there are many more in private hands throughout the United States.

The law provides that 10 cents of the export duty on every 100 pounds of coffee is set aside for this purpose, and it is estimated that this will be sufficient to meet the outstanding interest indebtedness which was due July 1, 1905, \$230,127 gold, in about three years, after which time the revenue derived by the law is to be applied to liquidating the principal of the said debt. Attention is called to the fact that no provision is made for payment of interest on the interest now due over a year; neither is provision made for the deferred payments. The amount to be collected will not be available until the close of the coffee crop which is just coming in. This will occasion a delay of not less than six months before the first payment is made, and then payment will be made on only such bonds as have accepted the 50 per cent scaling down of the law. [Copy of the law can be seen at the Bureau of Manufactures.]

NORTH AMERICA.

DOMINION OF CANADA.

EARNEST AND SUCCESSFUL INDUSTRIAL EFFORTS IN BRITISH COLUMBIA.

Consul A. G. Smith, of Victoria, reports progress and prosperity in the country round about his consular district, and notes the popularity of American products, etc. He writes:

The sentiment is rapidly changing for American-made goods, hence every kind of article manufactured in the United States for export can now be seen in all the principal stores here. This, too, in spite of the \$100 annual tax on commercial travelers who are not residents of the province and the tariff on imports.

The most important addition to the manufactures of Vancouver Island was the erection of a large Portland cement factory on Tod's Inlet, 10 miles north of Victoria. This enterprise involved an outlay of \$75,000. During the year it turned out 72,000 barrels of cement. Recently the capacity of the plant was doubled, hence, unless prevented by shortage of labor, it will turn out 150,000 barrels in 1906. It employs over 200 men.

MINING AND FISHERIES.

The mining in Vancouver Island in 1905 was not as successful as in previous years. The gross output of coal shows a decided decrease, caused by a seven months' strike at Nanaimo. The nonsuccess of the exploration for ore in the gold-copper mine at Mount Sicker is evident, yet the output of the mine for the year was 32,000 tons, valued at \$97,000. The eight metalliferous mines of the island shipped 61,126 tons of ore and gave employment to 202 persons. The mineral product of British Columbia for the year 1905 was valued at \$22,461,325, distributed as follows: Gold, \$5,902,402; coal, \$4,152,936; copper, \$5,376,222; lead, \$3,399,022; silver, \$1,971,818, and all other, \$1,658,925. This is an increase in value over 1904 of \$3,483,966.

The salmon propagated at the various hatcheries on the Fraser River and tributaries during the past season have been liberated, and an estimate of the number successfully handled is placed at 100,000,000. The total receipts from the fisheries were \$6,930,000, divided as follows: Salmon, \$5,750,000; halibut, \$500,000; cod, \$50,000; dogfish, for oil, \$50,000; smelts, \$25,000; oolakens, \$15,000; oysters, \$20,000; shellfish, \$20,000, and by-products, \$500,000. There are 69 canneries, representing a total capital invested in buildings, tools, and machinery of over \$3,000,000. The amount paid out for labor, etc., was \$4,384,000.

TRADE OF THE DISTRICT.

The customs returns for the district show a large increase in the value of exports, both domestic and foreign. The value of domestic exports was \$1,177,175, against \$825,008 in 1904. Exports, classed as foreign, amounted to \$1,188,231, against \$159,876 in 1904. This enormous increase was mainly due to the shipment of British naval stores from Esquimalt on the abandonment of that place as a naval station. The value of free imports was \$505,277; of the dutiable, \$2,373,302.

The imports into British Columbia from the United States in 1905 were valued, approximately, at \$3,000,000, while the exports to that country were nearly \$14,000,000. The chief articles of import were iron and steel manufactures, \$1,891,441; animals, \$409,259; fruit and nuts, \$147,684; provisions, \$410,110, and breadstuffs, \$381,613. The exports to the United States consisted of the following principal articles: Coal, \$1,909,752; copper ore, \$1,079,214; lead ore, \$351,781; pig copper, \$2,889,907; timber and lumber, \$746,346, and coke, \$363,920.

OTTAWA.

A MANUFACTURING CENTER—TRADE WITH STATES.

Consul-General J. G. Foster writes that Ottawa has achieved considerable success as a manufacturing center and is destined to develop materially in this particular in the future. Within a radius of 40 miles there are a number of water powers capable of furnishing, at a low cost, an aggregate of 400,000 horsepower. The mica mines in the vicinity of Ottawa furnish an excellent quality of amber mica. Indeed, it is the chief source of supply for the principal manufacturers of electrical machinery in the United States. Among the industries established at Ottawa and across the river, in the city of Hull, are two large paper mills, a match factory, four lumber mills, with an annual capacity of 200,000,000 feet, the largest sash and door factory in the Dominion, a tent and army supply factory, and a gas buoy and marine signal factory. There are 225 different industries in the city, representing \$15,000,000 of invested capital, and employing 10,000 hands, with a total annual wage list of \$3,000,000.

The total imports for consumption into Ottawa from the United States during 1905 amounted to \$1,803,984, of which \$1,045,804 were dutiable, and \$758,984 free goods. The exports to the United States for the same period amounted to \$2,674,925.

PRINCE EDWARD ISLAND.

THE AGRICULTURAL AND FISHERY PRODUCTS.

Consul D. J. Vail, reporting on the commerce of Prince Edward Island, says: The island being the smallest of the Canadian provinces, with no manufactories of importance, has to rely wholly on the resources of its agricultural and fishery products. The imports cover all classes of goods manufactured in the United States, with perhaps the exception of woollens, which come from European countries and neighboring provinces. Those engaged in agriculture reaped a harvest in 1905, owing to the large demand for potatoes from the United States. Cheese attained a price never before approached in this province, 877 boxes of cheese being sold recently at an average of 13 cents per pound. The output is estimated at 25,000 boxes, worth over \$200,000.

CANADIAN HERRING AND SCOTCH SYSTEM.

Consul E. N. Gunsaulus, of Rimouski, quotes a report from Ottawa that J. J. Cowie, who has been engaged by the Canadian government

the last two seasons demonstrating the Scotch method of herring curing and packing, has accomplished most encouraging results this summer in the Baie des Chaleurs:

Heretofore the fishermen of Gloucester have made no use of the large runs of spring herring, excepting as bait and garden fertilizer. Mr. Cowie, however, with his up-to-date methods of handling this fish, has shown that it has a value equal to the Scotch article, and a pack has been made that will probably realize from \$10 to \$12 a barrel in New York. Speaking of the fall run, which recently began, Mr. Cowie says he never before saw such herring. The Canadian fish of this class have never commanded a high price, owing to the primitive way in which they have been cured and packed. The fishermen of Baie des Chaleurs, however, have been profiting by the object lesson Mr. Cowie has provided, and are most grateful for the instruction afforded.

MEXICO.

INDUSTRIAL LIFE.

MARKED ADVANCE BY AMERICANS IN NOGALES.

Vice-Consul A. W. Brickwood, jr., of Nogales, reports about the mining, commercial, and manufacturing conditions of his district, as follows:

Mining interests have shown a marked advance in this district. The total value of export returns for the year ended June 30, 1906, was \$585,781. Of this amount \$539,673 was for gold, silver, and copper bullion, concentrates, and ores.

It has been found to be quite impossible to ascertain to a certainty the exact number of mining companies engaged in this industry, but after a careful canvas by this consulate it can be declared that 129 companies are in active operation at the present time, while a conservative estimate of others unknown—working in remote and inaccessible locations—will increase this number by at least 29. Of these, there are one French, one Italian, and two English, the others being American companies with but little mingling of Mexican interests. All of these import more or less from the United States, but only indispensable articles are brought in for the reason that the miner has little or no use for luxuries.

There are in this district more than 30 American importing firms, or nearly double the number of foreign; of the latter there are 4 French, 3 German, 2 Spanish, 1 English, 2 Italian, 2 Greek, and 3 Syrian. In addition to these there are at least 40 Chinese merchants who import. Notwithstanding these conditions, the value of importations from the United States for the year ended June 30, 1906, was \$2,671,620, as against \$367,858 from all other countries combined.

But little can be said of the existence or progress of industrial pursuits in this consular district at this time. There does not seem to be that interest which is manifested in other business. Within several weeks the only furniture factory in Sonora, an American enterprise, was destroyed by fire, but active measures are being taken to rebuild

and reestablish the plant on a larger scale. Another recent American enterprise here is a factory for turning out clothing of almost every description, including overalls, shirts, etc., for workmen, for which the field is a promising one.

There is a well-defined movement on foot among a few enterprising Americans to establish a plant for the purpose of placing upon the market products derived from hogs. It is the intention to select a site for ranch purposes on which hogs can be raised, in order to have the necessary supply on hand, after which the supply to meet the demand for such products, as it increases, will be obtained from any and all parts of the country. This enterprise is the result of a suggestion published in the Daily Consular and Trade Reports of Thursday, February 1, 1906.

AMERICAN PRODUCTS GREAT FAVORITES—IMPORTS AT SONORA.

Mr. Brickwood also reports excellent opportunities in Mexico for articles of American manufacture. He says that the imports for Sonora, via Nogales, came largely from the United States. He writes:

An undoubted preference seems to be given to goods of American manufacture in the Nogales consular district. Automobiles, vehicles of all kinds, agricultural implements, mining machinery, hardware, saddlery goods, iron beds, clothing and haberdashery, pianos and musical instruments, and phonographic machines, all of American manufacture, find a ready market. Reference has been made in these reports to the advantages to be derived from the establishment of a customs smelter of large magnitude for the northwestern section of Mexico. This territory, rich in gold, silver, copper, and lead, affords a splendid field for the establishment of such an enterprise. In the matter of industries that might be mentioned as affording excellent opportunities for establishment here are factories for turning out harness and saddlery equipments, a paper mill, a tannery, a sugar refinery, a shoe factory, a factory for making chairs, also one for iron beds, and for wagons, carriages, and buggies; also creameries for the production of butter and cheese. These would all pay a profit of a most satisfactory character. An unusual interest in the introduction of blooded cattle and pedigreed horses has recently been aroused among breeders in this section, and it is fair to assume that this will soon become one of the features of this part of Mexico.

The best interests of American exporters would be served and materially aided by sending experienced representatives to Mexico who are familiar with the Spanish tongue and who understand the Mexican character, customs, and business methods. If such men, tactful, conservative, and progressive, would call upon the trade with samples of their lines of business, much might be accomplished. All literature catalogues, designed to aid trade, should be in Spanish.

Another feature for the observance of American merchants seeking to extend trade with Mexico is the matter of credit. In this community long accommodations are expected and exacted. The time of three to six months, and frequently more, is considered reasonable by Mexican merchants for the payment of their bills. Favorable opportunities would be afforded American exporters, whatever their business, by the establishment of a show room for the exhibition of goods, wares, and products. It should be opened in some central locality.

SOURCES OF SUPPLY.

The imports for Sonora via Nogales in large part were of United States origin. The following table of imports gives the names of the articles and their values in United States currency.

Article.	Value.	Article.	Value.
Animal products.....	\$138,051	Machines and apparatus	\$438,696
Vegetable products.....	363,818	Vehicles.....	52,597
Mineral products	1,579,581	Arms and explosives.....	55,546
Textiles.....	163,552	Miscellaneous	115,577
Chemical products.....	82,601		
Spirituous drinks	18,642	Total	3,039,117
Paper and its applications.....	30,456		

COUNTRIES OF ORIGIN.

Country.	Value.	Country.	Value.
United States	\$2,671,261	Cuba	\$62
England	102,000	Switzerland	1,060
France	18,018	Italy.....	791
Germany.....	65,106	Spain.....	176,423
Belgium	2,214		
Japan	1,236	Total	3,039,120
Austria.....	949		

EXTENDED INDUSTRIAL MOVEMENT WORTHY OF STUDY.

Among the principal imports into Sonora from foreign countries are: Machinery, agricultural implements, furniture, wagons, carriages, buggies, and other vehicles, automobiles, bicycles, baby buggies, ready-made clothing, haberdashery, men's hats, millinery, shoes, nails, wire fencing, hardware, tinware, crockery, glassware, bottles, saddlery goods, arms, ammunition, musical instruments, cutlery, phonographs, jewelry, watches, clocks, canned meats, preserves, etc., live stock, printing paper, and stationery. Most of these are supplied by the United States.

The steel rails for the new west coast trunk line of Mexico, from Guaymas to Guadalajara—an extension of the line now passing through Nogales in active operation (the new line to be about 1,500 miles in length)—come from Spain and Scotland. Since October, 1905, about 450 carloads of steel rails from Spain, and about 60 carloads of hard-wood ties from Japan have passed through Nogales, to be used in the construction of the new road. At the present time hard-wood ties from Japan are mostly going by water to Mazatlan. Oregon supplies the pine ties and lumber used on the new road, having sent, since October, 1905, about 75 carloads. The spikes and bolts used on the new railroad are supplied by American firms. In the period since October, 1905, 25 carloads of spikes and bolts passed through Nogales, Sonora. Silks are chiefly supplied by Japan, France, and Germany; dress goods for ladies' dresses largely come from France, Germany, and Great Britain; perfumes from France; wines and liquors from France, Germany, and Italy, while considerable whisky is supplied by the United States.

COUNTRY'S NEEDS.

ARTICLES OF COMMERCE AMERICANS SHOULD SUPPLY.

Consular Agent G. C. Carothers, of Torreon, submits the following practical trade pointers for the benefit of American business men:

European manufacturers secure the bulk of the business in Mexico in galvanized iron and cement.

Canada is commercially invading Mexico in many lines, the latest of which is in cartridges and ammunition. The Canadian manufacturers claim equal quality and lower prices.

It is claimed by grocerymen in this district that asparagus is being imported from France in large packages, and canned in the City of Mexico under American labels as if coming from San Francisco, Cal.

There is a great opening in Mexico for manufacturers of high-grade ready-made clothing. A number of dealers have experimented in bringing in small lots, and find it very profitable. By properly advertising the goods a large business could be worked up by American manufacturers.

Cotton planters in the Laguna district are seriously considering the advisability of compressing their surplus cotton this year and exporting it to Europe. They claim that they can get \$1 to \$1.50 per 100 pounds more for it. This would be a good opening for manufacturers of cotton compress machinery.

Fresh apples are being imported into Mexico from British Columbia by several of the fruit dealers of Torreon with good results. These apples come through the United States in bond, and the cost price, when received here, is about the same as for the Northern apples, but it is claimed that although the apple is not as fine looking as the American the flavor is superior.

CIUDAD PORFIRIO DIAZ.

RAPID INCREASE IN FOREIGN TRADE.

Consul L. A. Martin reports that the trade of Ciudad Porfirio Diaz has been increasing at a rapid rate. He says:

The foreign trade of the city of Porfirio Diaz showed a wonderful increase. The total imports during the last six months of 1905 increased from \$2,834,077 to \$4,053,910 and the exports from \$2,841,598 to \$3,286,258, compared with the corresponding six months of 1904. The principal articles of import in that time were: Lumber, \$641,155; cotton, \$527,150; machinery, \$435,248; merchandise, \$410,326; iron pipe, \$289,265; wheat, \$121,190; shoes, \$191,394; coal oil, \$155,500; lard, \$77,225; textile fabrics, \$61,786; cotton-seed oil, \$77,300; leather, \$48,150; and crockery, \$67,310. The exports consisted of the following principal articles: Hides, \$292,645; pecans, \$128,508; goat-skins, \$263,420; colamine, \$138,737; ixtle, \$109,150; horses and mules, \$42,573; beer, \$178,893; rubber, \$66,074; and merchandise, \$83,369. The imports from the United States amounted to \$3,444,712, an increase of \$906,464, and the exports thither were valued at \$3,203,818, an increase of \$361,338, compared with the corresponding six months of 1904. The imports from Germany, for the last six months of 1905, amounted to \$363,853; from England to \$121,751; Japan, \$25,113; and France, \$39,454. The only countries to which articles were exported, besides the United States, were Cuba, which took \$47,693 worth, and France \$29,747 worth.

MACHINERY AND METALS.

MOTOR MACHINES.

INDIA AND AUSTRALIA INVITING MARKETS.

TYPES OF MACHINES NEEDED IN AUSTRALIA--BOATS AND BUSES-- OPPORTUNITY FOR AMERICAN MANUFACTURERS.

Special Agent Charles M. Pepper, writing from Bombay under date of September 15, furnishes a report on the motor trade of India which should be carefully considered by manufacturers of these machines in the United States. The excellent roads of India, extending for hundreds of miles, make heavy machines unnecessary in that country, and types of cars in general use are described by Mr. Pepper. There will be an exhibition in Calcutta in January next, at which American machines might be exhibited with decided advantage to their makers. Mr. Pepper describes how machines may be forwarded in ample time for this exhibition. His report follows:

India is rapidly taking a leading place in the exploitation of the motor industry in foreign fields. It is worth the careful attention and thorough investigation of American manufacturers who are seeking to enlarge their markets. The present time is an unusually good one for them to find out what the peculiar and special needs of the country are and what their competitors are doing to capture and hold the increasingly valuable trade. Reliability trials are to be held at Mysore, in southern India, during the Christmas holidays. These will be followed by a general motor exhibition at Calcutta from January 21 to January 30, at which all the leading European manufacturers will be represented.

The value of the trade is seen from the official statement that the motor cars, motorcycles, and cycles imported during the last fiscal year amounted to approximately \$2,000,000, of which one-half was through the port of Bombay, the supply mart of western India. Accessories, which are classified under different headings, add to this total, while fuel and lubricating oils have had largely increased sales since the use of motor cars has become popularized.

MANY MILES OF PERFECT ROADS.

One cause of the popularity of the motor in India is the number and the extent of good roads, some of them hundreds of miles in length. A perfect highway runs from Bombay to Delhi, 900 miles, over which the trials were made in 1904.

From Peshawar, farther north at the frontier of Afghanistan, a fine road extends all the way to Calcutta, a distance of 1,500 miles. These and similar roads are known as the grand trunks, and were built and

maintained as military highways before the advent of the railways. They are kept in a perfect state of repair. Other highways equally good are spread throughout the country, and in some of the states ruled by native princes particular care is given to the roads. One enterprising prince, the Maharajah of Gwalior, has caused a motorists' road guide of his state to be published, with maps, lists of rest houses, and other information.

POPULARITY OF MOTORS.

The high-class and high-priced cars which in any country must be considered as luxuries have found their best customers among the native rulers, whose example has been followed by the rich Parsee merchants and financiers of Bombay, and in a modest degree by some of the officials of the Indian government. Gradually the use of motors has spread until they have ceased to be looked upon as luxuries, and are now regarded as necessities by a growing number of persons who are able to invest from \$1,000 up to \$5,000 in a motor vehicle. At first it was found necessary to employ European chauffeurs, and this is still done by the owners of the finest machines, but it is now possible to obtain competent native chauffeurs at very moderate wages.

TOURING CARS AND MOTOR BUSES.

The touring car probably will continue for some time to offer a good field for exploitation, since it is especially favored by government officials for use by themselves and their subordinates in reaching districts not accessible by the railways, and it should be understood that there are still many sections of India without means of railroad communication. This is especially true of several of the native states whose rulers have been very progressive in providing means of motor transit. The number of touring cars to be seen in the warehouses and garages of Bombay is also noticeable. Motor buses, however, are yet to be introduced in the chief cities. The motorcycle has a fair sale, and the bicycle has not been relegated to the background, as in other countries. The large number of British troops maintained in India—75,000—is one explanation of the continued use of the motorcycle and the bicycle, since they are especially adapted to military needs. The importation of bicycles is about \$500,000 annually.

GOVERNMENTAL ENCOURAGEMENT.

A disposition exists in official circles to encourage the use of motor transport wagons for freight as the solution of one of the many problems with which the government is pressed in the economic affairs of the country. In many of the interior districts much loss results every year through the inability of the country people to get their produce to market. The official suggestion is that motor wagons might be manufactured which could transport the produce to the railway station and then be transferred to the railway trucks and be hauled as are ordinary goods on freight cars from station to station. Kerosene is proposed as the most suitable fuel for machines of this kind, since the handling of highly volatile spirits, such as gasoline, is relatively costly in a country of high temperatures, which India is. The significance of this suggestion regarding a special kind of motor for the railway trucks is its recognition that touring and passenger travel is not the only use to which the motors can be put.

INTRODUCTION OF MOTOR BOATS.

Motor boats also are seeking an Indian market. The government has ordered from England a police boat, which is to be fitted with a 6-horsepower paraffin motor, and is to have a speed of 6 miles an hour. The dimensions are to be 18 feet length, 5 feet beam, and 4 inches draft. Since this boat may prove the type of others that will meet the requirements of the Indian waters, further details of the construction are given. The shape is rectangular, with curved-in ends and sloped-up floor at bow and stern. The paddle-wheel propeller is fitted inboard and not beyond the stern, as is customary. The engine is provided with a reduction pulley about 5 to 1, whence power is transmitted to the paddle wheel by a broad, flat belt. No clutch or reverse gear is provided. Instead, a jockey pulley serves to regulate the tension on the belt, allowing it to slip when required, a *lignum-vitæ* block brake being at the same time applied to the belt. The boat is provided with two rudders, is built throughout of teak wood, and is copper sheathed.

A few orders are said to have been given recently for the importation of motor boats from Europe, while a local industry has sprung up in Bombay for the manufacture of hulls, the engines and machinery to be imported. It is claimed that the high sea freight on motor boats will prevent the importation of the hulls. The effort is also made to increase the use of paraffin or alcohol for fuel in place of gasoline, since the safety will be greater by the use of a heavier and noninflammable material.

TYPE OF MACHINES USED.

But the large trade for the motor industry in India will always be on land rather than on water, and some additional particulars therefore may be given regarding the type of machines in use and which promises to command the most profitable market. The Indian motorist does not care for great horsepower in the engines. From 16 to 30 horsepower is the range, with a decided preference for the lower figure. But much attention is given to the coach, which is expected to be both substantial and luxurious. The coach finish of the American cars is criticized for its roughness, and this objection applies also to the upholstering. Red leather is not disliked, and it may be said that the buyers in India, especially the natives, want plenty of bright colors. Automobile red does not satisfy them, and vehicles which in the United States would be considered gaudy appeal to them very strongly. They are also particular in wanting attractive engine fittings.

AMERICAN CAR NOT SATISFACTORY.

The American motor car is also too high to suit the motorists in India. They are accustomed to the English and French cars, hung low from the axles, and object to the inconvenience of climbing in and out of the automobile, to which Americans are most accustomed. Cars made for the "bumpy" roads of the United States are not needed on the perfect highways of India. Other considerations are of a technical nature, such as relate to the very hot climate of India and also to protection from the penetrating moisture of the monsoon or rainy season, for motoring is not entirely restricted to the dry season. But, generally, it may be said that increased horsepower is of the least importance, and that the growing market is for machines built on the French lines.

ENGLAND CONTROLS TRADE.

The trade up to this time has been largely controlled from England. The importations into Bombay during the last year from Great Britain were a little more than \$500,000, and from France about \$90,000. But many of the machines credited to England in the customs returns are manufactured in France. The colonial rights are held in Great Britain, and under this arrangement the cars are often invoiced and shipped direct from France. Complaint is made that the British manufacturers are not up to date, and the concerns holding colonial rights from some of the French manufacturers are likely to do an increasing business.

Italy has lately come into the Indian market with its perfected machines, and though the importations last year amounted to only \$32,000 the future promises to show marked gains. The customers for the Italian high-class cars have been found among the wealthy natives.

SUGGESTIONS FOR UNITED STATES MANUFACTURERS.

The importations from the United States into Bombay were only \$14,000, though several years ago this total was exceeded. In the beginning of the trade the cheap, light runabout had considerable vogue. The machine which was retailed in the United States for \$650 could not be handled in India at that figure, but was placed on the market at \$800. Soon, however, the popular light French machine with its 8-horsepower engine came into the field and was sold at from \$1,000 to \$1,200. It quickly displaced the American runabout, which was considered too light. The American company is now manufacturing a heavier machine, and one with 30 horsepower has lately been placed on exhibition, which, in many particulars, seems to satisfy the requirements of Indian motorists. But the opinion of dealers is that the sale of motor cars manufactured in the United States would receive a decided impetus if several manufacturers were to push for the business simultaneously and thus make the American machines better known. The market has grown beyond both the runabout and the light French machine, and is for cars that retail at from \$2,000 up to \$5,000. There are more than 600 licensed motors in Bombay, and it is noticed that the latest licenses granted are for the more substantial cars.

OPPORTUNITY TO EXHIBIT AMERICAN MACHINES.

The coming season is likely to be an excellent one for observation by manufacturers who may have enterprise enough to send representatives to study the peculiar wants and the special conditions of the India motor trade. They might find it advantageous to ship some of their machines which would meet the general requirements outlined in this report, and which could be received in time for the motor car exhibition at Calcutta in the latter part of January. While careful packing would be necessary, yet a single transshipment, preferably at Marseille, would be the only inconvenience. Any motor car sent out, however, should be accompanied by a competent motorist salesman as well as by a technical demonstrator. The French and Italian companies, which are the most successful in placing their machines, employ their best European salesmen.

Should any manufacturer in the United States decide to send out a car, by previous consultation with the steamship companies he could make sure of its prompt arrival. A shipment made in November, if proper precautions are taken, would be received in good time. But if manufacturers prefer first to make a study of the market, they would do well to send out a competent representative to arrive, if possible, by the Christmas season, for then motoring in India is at its height. Bombay can be reached from New York in about twenty-two days. The French liners which have a monthly service from Marseille take fifteen days between the two ports. The leading English line has a weekly service from Marseille which requires the same time, but a day can be saved by the overland mail route to Brindisi, leaving London Friday afternoons.

The market in India for motor cars certainly seems encouraging enough for some of the American manufacturers to incur the expense of sending special representatives to look into it thoroughly. Long distance correspondence and description will not obtain a share in the trade.

AUSTRALIA.

LOW GRADE CARS INJURIOUS TO AMERICAN TRADE—POPULAR TYPES DESCRIBED.

Special Agent Harry R. Burrill, writing from Perth in Western Australia, tells how the trade in American automobiles has been seriously injured by the shipment to that market of inferior machines. He says:

American exporters of automobiles have made a serious mistake in shipping to this market low-grade cars of inferior quality and poor workmanship. The result has been that the French machines are rapidly taking the lead and are giving excellent satisfaction where American models have proved a failure. According to the dealers of Perth and Fremantle it is apparently another case of "manufactured for export," followed by the discouraging consequences inevitably attending such practices.

When the American automobiles were first introduced, the possibilities for the establishment of a limited but substantial and increasing market were all that could be desired, and, as a matter of fact, a satisfactory trade in these cars was built up to the practical exclusion of automobiles imported from other countries. Dealers here assert that if the American cars had been sufficiently strong in construction to prevent frequent breakage and expensive repairs it would have been well-nigh impossible to break their hold on the market. Purchasers of American automobiles naturally expected that the machines would stand the wear and tear incident to ordinary driving, but were disappointed, and it must be admitted disgusted, and they are now turning to a car that has demonstrated its strength and staying qualities.

It is unnecessary for the purposes of this report to give the names of the American-made automobiles that have so unfortunately demonstrated their inferiority in this State, for they are still represented here by agents who express the hope that later models may show a decided improvement over the earlier importations. If this can be brought about a reestablishment of the trade is possible, but not easy of accomplishment. Importers here declare that it would now be dif-

ficult, under any circumstances, to restore confidence in an American-made car, but demonstrations that would prove beyond a doubt its strength, durability, and freedom from vexatious, constantly recurring, petty breakdowns, might be a means to this end.

FRENCH AUTOMOBILES IN DEMAND.

The popularity of the French automobiles is increasing steadily, for the reason, it is declared, that they are the only reliable cars on the market. There have only been a few English cars imported into western Australia. They have not given satisfaction, and it is probable that the importation will be restricted to those now in use. It is claimed for the French machines that, while they are more costly than the type of American cars imported, they will run for approximately a year with a comparatively small expense bill for repairs, a recommendation which appeals strongly to the drivers of automobiles of this State after their unpleasant experiences in this direction. There are, however, two points in favor of the American-made car which are peculiarly advantageous on Australian roads. First, the engine is placed in the center of the car, and, second, a standard (broad) gauge is used.

It is suggested by the automobile dealers here that the one large cylinder now used causes far too much vibration and that the adoption of two cylinders would be distinctly preferable for country work in this State. Cars of from 8 to 12 horsepower are best adapted for western Australia. A customs duty of 20 per cent ad valorem is charged on all cars imported. This means a duty of practically 22 per cent, for under the system in operation in western Australia 10 per cent is added to the valuation of the automobile and 20 per cent is then levied on that amount. A car capable of making 40 miles has sufficient speed for this country, for it is rare that one is called on to run over 30 miles.

AMERICAN CARS MUST BE MORE DURABLE.

Importers of American cars, in discussing the present deplorable condition of the market, assert that it would be far better for the manufacturer of the United States to add \$100 or \$150 to the initial cost of the machine and have it in as good condition as it would be if intended for the home market before it is started on its long journey to this country. They believe that the higher price that it would be necessary under those circumstances to charge on this market would not interfere with the sale, for Australians demand, above all other requirements, a serviceable machine, and they are willing to pay for it.

One illustration of the unbusinesslike methods of the American automobile shippers, to which my attention has been directed, will serve to show the difficulties under which the western Australian importers are working. A consignment of cars of a new and attractive model was recently received and it was found, when they were unpacked, that their gears had not been hardened. Such practices are, to say the least, discouraging, and point unerringly to the necessity for greater care in the export department of some of our home automobile factories. Tires yellowed with age and ripe for bursting at the first available opportunity are not exactly calculated to build up and maintain a market, and yet just such useless material has been sent out. Instances are cited where the dealers, in trying to inflate tires for the first time

preparatory to a trial spin with a prospective purchaser, had burst them. In this case, which was by no means an isolated one, it was a fortunate occurrence, for it enabled the importer to replace the defective tires before his customer had a demonstration of their utter worthlessness.

It may be said, however, that in recent shipments the tires have been all that could be desired, and it is to be hoped that the same relative improvement in all parts of the car may in the future be observed. It is regrettable that a trade in American goods that has been well established in western Australia, should be ruined or at least jeopardized through carelessness or possible indifference to the requirements of the market. It may be that the exporters of automobiles in the United States have been misinformed regarding the conditions governing the business here, but wherever the fault may lie it should be instantly corrected, for if a market is worth exploiting it is certainly worth preserving, and the exportation of inferior goods is not only harmful to that particular industry, but injures directly or indirectly business in all American commodities.

UNITED KINGDOM.

ENGLISH BUY GERMAN BUSES.

Consul-General Robert J. Wynne, writing from London, says that English orders for over \$1,000,000 worth of motor omnibuses have recently been placed in Germany to meet the pressing demand for these vehicles in London. In answer to English protests against the seeming failure to patronize home industries, E. H. Owens, a member of the Institution of Motor Engineers, writes to the London Mail:

There is little doubt that the announcement that a large order for motor omnibuses destined for London has been placed abroad in Germany will cause surprise to many of the British public. Such vehicles can only be produced successfully by large engineering factories. Long since, I strenuously endeavored to find even a single firm in England who could undertake the manufacture of motor omnibuses to my design. But it was of no avail; all seemed quite afraid of embarking on the business, though I could guarantee many thousands of pounds' worth of orders. And the result was that I was forced to go abroad, as I had had to do before for other engineering work.

Now, it is easy for me to supply motor omnibuses by the hundred, for the foreigner is eager for business. In the motor engineering industry he is beating the Englishman hands down for quality, for workmanship, and, not least, for price. It is all very well to cry "Pro patria," but what must one do when enterprise in one's country is absent?

ENGLISH EXPERIMENT OF SHIPPING BY ELECTRIC WAGONS.

Consul Albert Halstead reports from Birmingham that an experiment is being made in North Staffordshire with a 70-horsepower motor wagon for heavy freight traffic that may have far-reaching results, especially in the United Kingdom, where distances between industrial centers and to the seaports from the interior are comparatively short. Mr. Halstead writes:

The present experiment in using a heavy motor wagon, capacity six tons with a trailer carrying four tons, to carry goods from Hanley to Liverpool is especially interesting to Birmingham, whose manufac-

turers constantly complain of high freight rates, unfair and inequitable classifications, and the autocratic attitude of the railways that act in concert, even though there is no concentration of ownership. A Birmingham paper says that "if the scheme should prove successful, the promoters hope in time to run wagons also to Manchester and Birmingham and to tap the big railway companies at convenient points. As the scheme develops the promoters propose to establish depots and warehouse accommodation in the same way as railway companies, and they profess to have every hope of a successful issue to their enterprise."

HIGH FREIGHT RATES.

If it be found that freight can be carried expeditiously and economically by motor wagons the industrial situation of the United Kingdom will be materially strengthened. High freight rates, which seem inevitable because of very heavy capitalization of British railways, which was due to the immense cost of their initial construction, are a serious toll on British commerce. Canal traffic is important and helpful, but very slow. The canals are also small and many are owned by the railways. Compared to the splendid system of canals in Germany and France with their low freight rates, the United Kingdom is at a serious disadvantage and feels it more and more because of German competition for the markets of the world, which becomes more aggressive and keener each year. Then, too, German exporters have the advantage of lower railway rates on merchandise destined for export, while the greater regularity of shipment of foreign goods into the United Kingdom results in what are really better rates on merchandise and food products that come from abroad than are obtained by those destined for export. In these circumstances pronounced demand for the improvement of the British canal system, and even for its nationalization, is not surprising.

If heavy motor wagons prove successful carriers of freight, the further development and improvement of the canal system will not be so important, railway freight rates will naturally come down, whatever arbitrariness there may be on the part of railways will disappear, and the Kingdom will be in far better position to hold its own in the markets of the world, and even to increase its share of those markets.

There is little reason why the experiment with motor-wagon freight carriers should not be successful here. Roads are almost universally good, distances are not great, motor construction is improving and the output increasing, while rates for carriage should remain low because the highways are free. There can, therefore, be no monopoly of the new method of freight transportation which experts have declared would certainly result from the development of motor wagons.

RELIABILITY TESTS IN SCOTLAND.

The recent reliability tests of automobiles in Scotland are reported on by Consul R. W. Austin, of Glasgow. The American cars entered came out very well in reliability, but failed in hill climbing in the matter of fuel consumption. Mr. Austin says that these trials are of importance to the American automobile trade, and will have a far-reaching effect on the sale of American motors in Great Britain. He submits a detailed account of the trials, with extensive criticisms; also copies

of letters from American tourists interested in motor vehicles and British dealers in various machines, all of which contain a wide range of discussion of American cars and as to what is needed for the British trade. These reports will be loaned by the Bureau of Manufactures to the automobile trade in the order of receipt of applications.

MECHANISMS FOR INDIA.

INFORMATION AS TO MARKET OPENINGS.

STEADILY INCREASING DEMAND FOR SMALL MACHINES—INVITING FIELD FOR AMERICAN ENTERPRISE.

Writing from Bombay under date of September 29, Special Agent Charles M. Pepper furnishes a report on the various classes of machinery used in India, and declares that the industrial development in progress insures an increased demand. Manufactures of Great Britain dominate in machinery as in textiles and other products imported into India, but Mr. Pepper points out how manufacturers of the United States may enter the India markets and capture a considerable portion of the British trade. He writes:

India as a buyer of machinery has peculiarities and limitations, yet the purchases are increasing and the market once secured is a permanent one. In seeking to supply it, the distinguishing characteristics of the native population must always be kept in mind. The manufacturing industries of the country are few, and outside of the cotton and jute mills factories are not numerous; but there are a vast number of hand industries which require certain types of machines. The requisites for supplying them are simplicity and comparative cheapness. Novelty is a drawback. The Hindu is as conservative in his methods of labor as in his religion. He prefers the patterns and designs which his fathers have used, and while he can be got to accept innovations when their greater utility is demonstrated, this only can be done by conforming outwardly as far as possible to the models to which he has been accustomed.

WAGES OF COOLIES AND ARTIZANS.

Allowing for the persistency of habit, I am assured by importers of machinery that the native workers show excellent mechanical capacity, provided the machines which they are put to operate are not too complicated. Their hands are deft, and their feet also. But the excessive cheapness of coolie labor always has to be borne in mind, and also the low wages, which, in the mechanical pursuits, are a little above agriculture. When 25 cents a day represents the earnings of an artisan, neither high efficiency in production nor marked mechanical skill can be expected. Nor, outside the cotton mills, are manufacturing plants with large capital to be looked for. In many industries an investment of 100,000 rupees, or \$32,000, is the limit; but it must be understood that, as measured by prevailing economic conditions, \$32,000 in India stands for as much as \$100,000 in the United States. Yet the best market is not to be found in plants of this character, but rather in the infinitely larger number of small shops where an investment of from

\$500 to \$2,500 supplies the necessary outfit. Some of these are practically cottage industries. A dozen streets in Bombay are given up to them, and a day or two spent in these crowded quarters shows how the multitude of the small shops which exist for every possible purpose, from repairing an automobile to drilling a hole in a copper plate, in the aggregate make the demand for machinery an important one.

THIN AMERICAN WEDGE.

The United States has inserted the thin edge of the wedge into this trade and American manufacturers may find encouragement from the admission of some of the ultra conservative British houses that they are at a disadvantage in competing with the machine tools of the United States. In several lines of metal-working machinery they would be compelled to depend on their American competitors if sufficient enterprise were shown by the latter in cultivating the Indian trade. As it now is, the direct imports of this class of machinery are not large, though a fair quantity is transshipped in England from consignments made without the American exporters knowing the destination. But these transshipments are usually only to fill out where the British manufacturer is unable to supply what is wanted, and are a hindrance rather than a help to American articles. In metal-working machinery, as in every other class of goods, the manufacturer in the United States should seek to preserve the identity of his products by all possible means, and especially by direct trade.

Among the manufactures for which a permanent and reliable market now exists in Bombay are small forges, lathes, drilling, planing, punching, shearing, and similar tools that can be operated by hand or foot. The manager of a leading importing house informs me that the use of lathes operated by foot power and of drills is increasing, and that the American manufacturers would add to their sales if they paid more attention to providing their products with bed gaps so that the machines could be fastened to the bench. Most of those now forwarded are for fastening to the post or wall, but the Hindu wants them attached to the bench, since that conforms better to his manner of working.

SOLIDITY PREFERRED.

Some small steam drills have been imported from the United States and have given satisfaction; but, for the reasons already stated, the larger sale is for the hand drills. The great body of the consumers are not able to provide themselves with steam power. The manager above quoted suggests that in all kinds of metal-working machinery intended for India the American manufacturers should consider solidity rather than lightness of finish or novelties in the way of improvements.

For generations the only pattern known to the Hindu has been of the heavy British type, and while he is not averse to availing himself of improvements, as is shown by the market that has arisen for the American metal-working tools, he takes most kindly to those which are of the solidest pattern. So long as increased efficiency can be demonstrated, it is better not to insist on offering him the further advantages of finish and what the British importers of machinery call "Yankee gimcracks." It may be added that a technical physical demonstration is all that counts with the Indian buyer. Illustrations, descriptions, and the fluency of the most persuasive salesman go for nothing unless all that is claimed can be shown before his eyes. A working model is essential.

PUMPS FROM UNITED STATES.

The United States is now sending each year to India by direct shipment about \$50,000 worth of pumps and pumping machinery, most of which is imported through Bombay. Hand pumps command the largest sale, and a firm at Salem, Ohio, is the leader in the trade. These hand pumps answer the native needs in every respect. Some American steam pumps are also imported, and the best market for these is for general service ones. The large number of bungalows or villa residences which form a feature of the life of the well-to-do classes, both European and native, and which require a complete plant for their own use, afford a constant market for pumps of all kinds. Windmills in some sections of the country have a good sale, but their consideration may be left for the topic of agricultural machinery in a later report. Pumps for irrigation will also be considered later, but it may be said that the demand for triplex-power irrigating pumps is a good one. The gearing should be about one-half higher than for the same pump in the United States because the bullocks and water buffaloes, which in India take the place of the horse, move at a very slow gait.

PRINTING PRESSES AND TYPE.

In answering a question which has been forwarded to me regarding the market for printing presses, by stating that there is an opening for small hand presses, a word of explanation is desirable. What is known as the Anglo-Indian press—that is the newspaper and other publications in English—has some very fine modern plants with the latest improvements in American presses. But these orders are given through London, and the trade is not one that offers new prospects. The real opportunity is in supplying the native or vernacular press both for newspaper and for job purposes. The number of daily and other journals published in the vernacular is astonishing. At Lahore, in northern India, which is the capital of the Punjab, there are 14 or 15 daily papers.

The difficulty in casting type for the vernacular languages of India is not insurmountable. While the Urdu, or proper Hindustani, has to be written by professional copyists with reed pens on specially prepared paper and then lithographed on stone and printed in this manner without type, the Hindi offshoot from Sanscrit can be produced from type, as can the various vernacular languages cognate to the original Sanscrit. The Marathi, which is used in parts of the Bombay district, Gujrati, Punjabi, Bengali, Tamil (which is the prevailing tongue in southern India), and other forms of the popular speech in different regions, all differ from Hindustani in that they can be printed from type. Several typefounders in the United States who supply the missionary publication houses with the Bible in foreign tongues, of which copies in forty languages and dialects are distributed in Bombay, have adaptations of the Sanscrit characters suitable for most of the printed languages of India. The supposed lack of suitable type does not therefore retard the progress of the printing industry. For reasons not necessary to enter into here the publication of newspapers, pamphlets, and small books in the vernacular languages is certain to go on increasing, and thus to create a demand for presses and the other accessories of printing. The point for the manufacturer to know is that, as in other industries of India, the capital available for a plant is not large, and expensive presses are out of the question. But the aggregate of

these modest publication plants is large, and this is what should invite the United States to cultivate the market for them.

LAUNDRY MACHINERY AND TYPEWRITERS.

Replying to a query concerning steam-laundry machinery, the prospect is not encouraging, though, so far as I have been able to learn, there is only one steam laundry in Bombay, and that a small one. The excessive cheapness of the labor of the dhobies, or native laundrymen, and the limited transient population are drawbacks to such an enterprise. The 20,000 persons who may be said to constitute the permanent European population of Bombay have accustomed themselves to the inferior native work. Two or three times local capitalists have considered the possible profits of a steam laundry and have asked quotations and other particulars from the manufacturers in the United States. But when the prices were received they found that, with the freight charges and the expenses of installation added, the total cost would be between \$10,000 and \$12,000, which they declared was prohibitive. From \$5,000 to \$6,000 is about all that anyone is willing to risk in installing a steam-laundry plant in Bombay.

An excellent market for typewriting machines has been established, and is of course controlled by the American manufacturers. Most of the leading machines are represented by local agencies, and the competition among them is very keen. A newcomer into the field would find that no necessity existed for educating the public concerning the advantages of typewriters; but in undertaking to demonstrate the superiority of his own machine he would discover that the ground already had been well covered. Nevertheless, the demand is so constant that a new type of machine, or one new to Bombay, might establish a market if it could demonstrate its superiority in any important particular. The chief native importing and commercial houses generally conduct their correspondence in English and make use of the typewriter for this purpose, as do also the cotton factories.

CASH REGISTERS AND SEWING MACHINES.

Cash registers have been slow in coming into favor, and at the present time not more than a dozen are in use in all Bombay, but their introduction at last having been obtained they appear likely to command a fair sale, both the simple and the multiplex register.

The demand for sewing machines is a steady one, but to command a large sale they must come within the means of the great body of consumers and therefore be cheap. For this reason Germany is a strong competitor with Great Britain and sends one-third as many machines as the latter country, though their value is far below one-third the value of the English importations. The total number of sewing machines imported into Western India during the last fiscal year was as follows: From Great Britain, 5,991; Germany, 2,175; Belgium, 653; United States, 472. Both the Singer and the Wheeler and Wilson companies have Bombay agencies, but I am informed that the Singer machines are those from the factory in England and their sale does not add to the United States trade.

ELECTRICAL FLOUR MILL AND SAWMILL MACHINERY.

Electrical installation in Bombay has just begun. Several years ago the Boston capitalists who owned the tramway system proposed the change from horses to electric traction and to provide power for a

variety of purposes. A local English official who was strangely opposed to American enterprise succeeded in blocking an agreement with the municipality which would have enabled this to be done. Finally the Americans closed out their interests and the work was undertaken by a British company, which after several years is just getting into shape to supply power. At present not more than 200 electric fans are in use in Bombay, but their number will be largely increased. The business of supplying hotels, bungalows, etc., with small electric plants appears to be in the initial stage.

A proportion of the Indian wheat crop is ground into flour for home consumption. The flour mills are located chiefly in Northern India, which is the grain-growing section of the country. The supremacy of American manufacturers in flour-mill machinery should give them an opening in supplying Indian mills. But, as in every other industry, the limited capital must be understood, and the modest plants not be confused with the great mills of Minneapolis or Rochester.

There is good opening for sawmill machinery, but here too the plants wanted are small ones. A saw mill for India delivered at the dock in New York, free on board, for \$300 does not appear to indicate a wide market, yet it is the aggregate of these small plants that counts, and the best sale is for plants which can be thus delivered at \$300 to \$500. The freight and other charges bring the price in India up 10 to 15 per cent. In some shipments of saws that have been made the manufacturers in the United States have not clearly comprehended what is required. The chief wood of India, which is used for every purpose from hand carving to furniture and house building, is teak wood. This is very hard and heavy, almost equal to iron wood or *lignum vitae*. It turns the inserted teeth of an ordinary circular saw as if they were tin. Sawmill machinery for India should therefore be made so as to meet this difficulty.

GREAT BRITAIN SUPREME IN TEXTILE MACHINERY.

Textile machinery is so largely a monopoly of Great Britain that it can not be said India offers a field in which American manufacturers could compete on even terms. The short staple, very coarse, Indian cotton affords little similarity to the long-staple product of the United States, for which the home manufacturers have been accustomed to provide machinery. Should what is known as the Spence cotton tree work the revolution in Indian production which is promised for it and demonstrate that an indigenous staple superior to that of the United States exists, new machinery suitable to the long staple would be necessary and the experience of the American manufacturers might enable them to compete with the English. But though very flattering reports of the Spence cotton tree are given and its cultivation is being extended, no great change in the machinery supplied to India in order to gin, spin, and weave the new product is likely in the immediate future. The prosperity of the cotton industry during the last two years has caused the erection of many new mills and the remodeling of old ones, so that India is becoming supplied with the latest improved machinery.

While there does not appear to be much of an opening for American installation of textile machinery, there is a good market for accessories, or what the British call mill stores. Small stationary steam

engines for the ginning factories are in demand, and a salesman by means of illustration occasionally might be able to sell a large compound engine. The Indian boiler act is very strict in its requirements and differs essentially from the tests which are imposed in Great Britain or the United States, so that its provisions should be carefully studied.

SHAFTINGS AND PULLEYS.

In steel shaftings, split pulleys, etc., the American manufacturers have been quite successful in satisfying the requirements of the Indian mills and they also have been able to meet the prices quoted by the British manufacturers so that a good trade has been obtained. In belting, however, concessions both as to price and as to methods will be necessary if a foothold is to be obtained and maintained. The Indian market requires that the belting be sold by the pound instead of by running feet, as is done in the United States. The English price is considerably below the American one, and it is claimed that a 300-foot roll bought by pound weight in England, totals one-half less than when bought in the United States. With this discrepancy there is not much chance of extending the American trade until belting is offered by weight, and prices shaded to the English basis.

MARKING AND PACKING.

In all classes of machinery shipped to India it is desirable for exporters to understand that the provisions of the Merchandise Act requiring the country of origin to be distinctly stamped are enforced very strictly by the customs authorities. It is not necessary to use the words "made in the United States of America," yet "United States," or "U. S. A.," must be a characteristic mark and not a makeshift. In machine tools the importance of complying with this requirement is sometimes overlooked, which causes annoyance and expense to the importer, and often results in a loss of further orders.

The complaint about careless packing is universal. Machinery, as a rule, has to be shipped "knockdown," and some of the exporters apparently in packing the parts consider that several thousand miles of ocean transportation calls for no more care than if the machinery parts were to be sent across a ferry. Almost invariably the lumber used is too light. For machinery of whatever kind destined for India stronger lumber should be used, and the covering should be bound by iron hoops. I do not enlarge on this subject, because in the matter of packing India is simply another chapter in the familiar book of American backwardness in meeting the requirements of foreign trade.

CATALOGUES AND CORRESPONDENCE.

While seeking business by means of correspondence, catalogues, and similar indirect methods is unsatisfactory, nevertheless, in view of the very limited experience of the Indian factories with the use of American machinery, a preliminary step toward interesting them, especially in mill accessories, might be taken through the mails and be followed up by traveling salesmen. The majority of the weaving and spinning mills are members of the Bombay Millowners' Association, some of whose leading members are anxious to secure active competition in place of the present dependence on the British manufacturers of mill machinery. For the manufacturers in the United States who may care to open correspondence, a list of the different companies in

Western India, with post-office addresses, is forwarded to the Bureau of Manufactures. In the list of cotton mills the number of looms and spindles shows the size and relative importance of the different factories.

NOTE.—Copies of the list may be obtained by addressing the Bureau of Manufactures.

MINERS' WANTS.

MACHINERY NEEDED IN AUSTRALIA.

AMERICAN MANUFACTURERS MAY INCREASE TRADE.

Special Agent Harry R. Burrill sends from Kalgoorlie, Western Australia, an account of his investigations of the equipments for mining operations, and how the American manufacturers are faring in supplying them, together with how they may increase such sales. Mr. Burrill writes:

Mining machinery of all descriptions is one of the principal importations into Western Australia, and while American goods are well represented the greater part of the supply comes from Great Britain. This condition is not attributable to any sentimental desire on the part of hard-headed mine owners or managers in the gold fields to patronize English manufacturers, but because the heavier English machinery, obtainable at a lower price, is, as a rule, preferred. American machinery is regarded here as too light of construction, with a greater element of danger attaining its operation. Whether there be any justice in this claim is immaterial so far as its effect on the market is concerned, for the prejudice exists and dealers in American machinery find it an exceedingly difficult one to overcome.

The independent attitude assumed by the American manufacturers is in sharp contrast to that of their English or German competitors, who are making every concession possible to the whims, the prejudices, the likes, and the dislikes of their Australian customers. This indifference on the part of the exporters of the United States to the requirements of a market which unquestionably requires somewhat delicate handling is, according to the importers of Western Australia, a serious handicap in the effort to maintain and extend the trade in mining machinery.

Defects in construction, or, more properly speaking, errors of judgment in catering to the market, have been pointed out, and the necessity for exercising greater care in shipping has been explained to the home manufacturers by their representative here, but, it is to be inferred from the complaints made, the advice has received little or no attention.

British and German manufacturers, on the contrary, are reaching out for export trade, and recognize the necessity, in order to sell their goods abroad, of making articles that will satisfy the foreign trade. With this end in view they promptly adopt such alterations or improvements as may be suggested by their agents, who, it is assumed, thoroughly understand the requirements of the market, and the result has been a gratifying expansion of their trade in Western Australia.

HIGHER PRICES CURTAIL SALES.

American machinery of a certain class has also suffered through the disposition on the part of the manufacturers to increase the price when the goods have become well established and popular on the market. At the time of their introduction the cost to the mining men was regarded by all concerned as fair, and it was certainly sufficiently low to underbid English, German, or colonial competitors. The machinery gave satisfaction and the demand increased in proportion to the extension to the mining industry. When, however, additional machinery of this kind was required, the importer was compelled to quote a higher price for the same article, and the business, in consequence, went elsewhere. The conditions at home quite possibly justified the jump in the export price, but that explanation fails to convince a customer on the other side of the world that he ought to pay more for the same material than his neighbor paid.

Notwithstanding these practices, which are regarded here as decidedly injurious to the maintenance of American export trade in western Australia, machinery from the United States is fairly well represented in the mines, although no doubt is expressed that the business could be largely extended by a more liberal attitude on the part of the American manufacturers. Careful inquiries on the ground concerning the mining machinery used elicited information with regard to the country of origin which may be of interest to our home manufacturers. While the estimates given are only approximate, they are reliable, representing, as they do, the unbiased judgment of mining experts.

The United States supplies nearly all the rock drills (air, electrical, and hand-actuated machine) used. The small winches are almost entirely of colonial (Australian) and English make. There are only a few electrical winches in use. The winding engines are of colonial, English, or American manufacture, and the preference shown is in the order named, while in rock breakers the United States leads, with England second.

AIR COMPRESSORS, PUMPS, AND STORAGE BATTERIES.

English and American manufacturers divide between them three-quarters of the air compressors used here, with the United States in the lead, and the other quarter is of colonial make. Broadly speaking, England furnishes two-thirds of the steam engines, Australia one-quarter, with the remainder from the United States. American surface condensers are popular, fully three-quarters of those in use being imported from the United States, with the rest scattered. One-half of all the boilers (water tube) are of American make, while the remainder are of the shell variety. In belt conveyors and accessories American manufacturers have a commanding lead, exporting fully seven-eighths of those used in the gold fields.

The gravity stamp mills are all of English or colonial make, while Germany controls the Ball mills and the United States the Huntingdon mills. Grinding pans are of colonial manufacture, while Germany supplies the filter presses and ore elevators.

American-made steam pumps have fully three-quarters of the trade, while seven-eighths of the belt-driven pumps are of English and colonial manufacture. Australian manufacturers supply practically all the mining trucks used, and seven-eighths of the tailing trucks are

imported from Germany. In neither of these articles is the American manufacturer represented. Up to this time Germany has installed all the aerial trams used on the gold fields.

In the opinion of mining experts who are thoroughly familiar with the situation several of the larger mines are in a congested condition because no suitable means are available for carrying away the constantly accumulating residue or tailings. In order to transport this refuse, gas or electric storage-battery machines are required, and it is believed that the demand for vehicles capable of hauling 3,000 to 5,000 tons a week will soon be large.

ORE SAMPLING MACHINES WANTED.

There are practically no machines on the gold fields for sampling gold ore, including, for the purpose, rock breaking. An article of this description, costing not to exceed \$1,250 and capable of doing its work to the satisfaction of the mining men, would command a ready sale with probably an expanding market.

The steady growth of the mining industry in Western Australia has demonstrated the necessity for such machines, and it certainly would not be an unwise move on the part of our home manufacturers to carefully investigate this particular field with a view to being the first on the market. This in itself would be of great advantage in holding the trade, and if in addition the articles and their prices were satisfactory European or colonial manufacturers would find it a difficult task to dislodge them.

No attempt has been made to describe in detail the machinery in use in the mines of Western Australia, nor were the inquiries at the gold fields carried on with any such purpose in view. The information obtained shows all that is really essential, indicating, to those interested, the machinery in use, approximately the proportion of the trade controlled by competing nations, and the country of origin. Specifications are easy of access, through importers of machinery in Kalgoorlie, Perth, or Fremantle, if American exporters believe the market worthy of further attention.

It is declared by importers of machinery in Western Australia that American boiler plate is thinner than that manufactured by other countries and not equal to the pressure. American-made plates are of three-eighths inch steel, while the English manufacturers use one-half inch. There is also considerable dissatisfaction expressed over the use of a single row of rivets on a 3-inch plate, which contrasts unfavorably, they declare, with the English method of putting on a one-half inch plate a double row on the longitudinal seams and three rows on the transverse. There are also complaints made of the multitubular-loco fire box type of boilers, which are difficult to dispose of here. Dealers in Western Australia also declare emphatically that all upright vertical tube boilers sent out should be equipped with submerged tubes in order to prolong their usefulness.

GERMAN COMPETITION—STANDARD PIPE THREADING.

American shoes and dies, for which contracts at times call for 20,000 of each, are practically out of the market, because of their price and quality. The latest quotation on shoes and dies, made of Krupp steel, was £17 10s., while the price of American shoes and dies, made of hematite iron, was £23. Under these conditions the dealers here

assert that it is absolutely impossible to compete with the German article, and that in consequence an attractive and profitable market has been lost.

According to the importers and mining experts of this State, especial attention should be directed to the necessity for a standardization of threads for piping and tubes. The English, or Whitworth thread, is preferred for its tighter fit, among other reasons, and, it is asserted, that in the purchase of spares or renewals of parts of machinery, buyers can not be influenced in favor of the American standard. The opinion is practically universal here that American manufacturers should make their thread the same as the English if they wish to please the trade and, at the same time, extend the market for their products.

CUSTOMS DUTIES AND PACKING.

The customs duty on machinery is $12\frac{1}{2}$ per cent, but, under the system in operation here, 10 per cent is added to the value of the goods for the purposes of valuation by the customs authorities, and the $12\frac{1}{2}$ per cent duty is then levied on that amount. The government of Western Australia has also recently adopted a plan by which the freight charges from the factory to the seaboard are added to the valuation of the goods. For instance, if the freight from Chicago to New York on a shipment destined for Fremantle amounted to \$100 the customs officials at the port of Fremantle would first charge 10 per cent, or \$10, and then levy a duty of $12\frac{1}{2}$ per cent on the \$100 freight rate plus the 10 per cent, or \$10, in addition to the assessed valuation of the goods. This practice, of course, extends to all exporting countries, with no discrimination whatever, but, because of the longer hauls in the United States, it may operate slightly to the disadvantage of our home manufacturers.

The packing of American machinery is, as a rule, satisfactory, but the length of time required for deliveries to this market is regarded as a serious handicap to trade in these commodities. Another influence operating against the successful prosecution of business in American machinery is the disinclination of the manufacturers of the United States to adopt the suggestions of their representatives here. Several instances have been brought to my attention where the American manufacturer has intimated, in response to a request for such alterations in construction as would appeal to the western Australian trade, that machinery good enough for the home market is certainly good enough for the market over here.

The absurdity of this theory has been so often demonstrated that it seems superfluous to add a line of comment. It may be said, however, that the surest, quickest way to lose a foreign market is to adhere strictly to this rule. England and Germany have found this out and are taking advantage of the knowledge. Some manufacturers of the United States, quite as well informed, are apparently indifferent to its importance.

An illustration of the determined efforts on the part of English and German manufacturers to secure a stronger hold here may be found in their willingness to send out samples or stocks to their representatives in western Australia, with the request that they try to introduce them on the market. This expense is borne by the manufacturers, and no outlay of money is required of their agents in this initial work.

This practice is not pursued by American manufacturers. Any goods sent to this market, either on order or for experimental purposes, must be paid for by the importers with a sight draft, a sixty-day draft, or a ninety-day draft, making the transaction practically a purchase and sale for cash. Only to dealers whose financial responsibility is established are goods consigned in this manner by the manufacturers of Great Britain and Germany, but, according to the western Australian importers, whatever may be the standing of a firm here, American manufacturers are disinclined to ship unless the draft is immediately forthcoming. This practice insures against loss, but the English and German methods unquestionably stimulate the introduction of new goods.

A note of warning should be sounded to American manufacturers regarding patented articles. It is declared here that Australian foundries copy the principal parts of machinery required on this market, irrespective of any protection supposedly guaranteed by patent. It is essential that when a patent is applied for or granted at home an application should be at once forwarded to Australia. If this application reaches here subsequent to the arrival of the Gazette, authorities will as a rule decline to issue the patent. If it should be issued, however, it will not hold in an action brought for infringement.

The mining industry of western Australia is still in a remarkably flourishing condition, pointing to a continued demand for all kinds of machinery used for mining purposes. The market is a substantial and growing one, and American representation can unquestionably be increased, if desired, through stricter attention to the requirements of the trade and the maintenance of cordial cooperations between the manufacturers of the United States and their agents in this State.

[A list of dealers in mining machinery at Perth, Fremantle, and Kalgoorlie are furnished by Mr. Burrill, and are on file for reference at the Bureau of Manufactures.]

HARDWARE.

MARKETS IN AUSTRALIA.

THE UNITED STATES NEXT TO GREAT BRITAIN—GERMANS AIDED BY THEIR GOVERNMENT.

Special Agent Harry R. Burrill, writing from Perth, in Western Australia, tells how American manufacturers can still further increase their sales in that country. Great Britain exports the greatest quantity of hardware to western Australia, with the United States second and Germany a poor third, but in some articles extensively used in that State the American goods have a commanding lead, and will hold it as long as the standard is maintained and the price remains satisfactory.

Unfortunately for the retention of our trade in bolts and nuts of three-eighths inch and upward, and other articles on which a thread is required, great dissatisfaction is expressed and complaints are frequent regarding the American style of thread. Because of this the demand is falling off and the injury to the business threatens to assume

formidable proportions unless some remedy can be applied. On all sides and from all sources may be heard an insistent demand for the standardization of the thread, and, because the American thread is not as tight a fit as the English, and is in consequence regarded as far less satisfactory, buyers in their orders are stipulating that the English standard thread be furnished. This condition unquestionably constitutes a grave menace to the American export trade in this class of material, but the importers and dealers generally assert that if the manufacturers of the United States would make their thread similar to the English standard they could command the market. Because of the large quantities of material of all kinds used here on which a thread is required it would seem to be good policy on the part of the American manufacturers carefully to investigate the difficulty through their representatives here with a view to adopting some plan by which the cause of the existing dissatisfaction may be removed and these products of American mills regain their popularity with the trade.

AMERICAN GOODS ON EXHIBITION.

Among the American-made commodities which control, or are largely represented, on the market, are saws, axes, edged tools of all kinds, files, harvesting and garden implements, and carriage wood-ware. In the big show windows of the larger retail hardware stores of Perth, Fremantle, Kalgoorlie, Albany, Bunbury, and other western Australian cities, American goods are prominently displayed and present an attractive appearance. An Australian hardware store without American wares would be about as interesting to the average buyer as a theatrical show with the star part omitted. The wooden pulley blocks, used on vessels of all kinds, are imported from the United States, and give excellent satisfaction, but the small gear (fittings, etc.) are all brought out from England and command a large sale. The reason for dividing the source of supply is simply a question of price for English exporters can lay down fittings at Fremantle at a considerably lower figure than they cost when imported from the United States. Dealers here are confident that if these articles could be put on the market at as low a price as the English product they would immediately be given the preference because of their superior quality and better finish. It is an item which, according to those who are closely in touch with the situation, would well be worth an investigation by American firms interested in this trade.

In the importation of hardware, as in all other commodities, there is no discrimination in favor of or against any exporting country so far as the customs duty is concerned. It would be a difficult as well as useless task to enumerate in detail the duty levied on every article coming under this classification, but suffice it to say that in figuring on the cost of laying goods down at Fremantle to compete with commodities imported from other countries, the American manufacturer will only have to consider the initial cost, handling to the seaboard, freight, insurance, and exchange for the duty, as wharfage and cartage at Fremantle are the same to all.

GERMANS HELPED BY THEIR GOVERNMENT.

The freight rates from the United States to Fremantle and from Germany to Fremantle on hardware are approximately the same at

the present time, but the fact that in a recent quotation on a large order for wire nails Germany underbid the best American price 7s. 6d. a ton would indicate that the manufacturers of Germany are receiving help from their Government in transporting goods from the factory to the seaboard. The difference in the steamship freight rates could not possibly account for any such cut in price—a cut so serious that unless the importer of the American wire nails can meet it he must inevitably lose the market.

In this State there is comparatively little direct importation, as orders are usually placed through commission houses. The system of payment, against which but little complaint is heard, is by sight, or sixty- or ninety-day drafts. These drafts carry $1\frac{1}{4}$, $2\frac{1}{4}$, and $3\frac{1}{4}$ per cent exchange, respectively, and the transaction is practically a purchase and sale for cash. As a rule the packing is satisfactory, although in isolated cases complaints are made of the carelessness of shippers in not properly protecting the goods against the rough handling incident to so long a voyage. Importers generally commend the American manufacturers of these articles for their efforts promptly to fill orders according to specifications, and on the whole the trade is on a good footing.

With hardware, as with every other commodity imported into western Australia, American, English, and German manufacturers are the principal competitors, and the control of the market is usually in the hands of those who combine quality with low prices. There is no prejudice in favor of England, because she is the mother country, observable here, and the products from her factories must compare favorably in cost with those of competing nations or she will lose the trade. Australians buy in the cheapest market and in all business transactions sentiment runs a poor second to dollars and cents.

FARM IMPLEMENTS.

AMERICAN METHODS IN RUSSIA WHICH BRING RESULTS.

On the subject of agricultural machines in Russia the German consul in Moscow has written a long report from which Consul-General Richard Guenther, of Frankfort, makes the following extracts:

“The total value of all agricultural machines and implements imported by Russia during the year 1904 was 18,900,000 roubles (rouble = 51½ cents); 94 per cent of this importation came from Germany, the United States, and England, their respective shares being 39, 31, and 24 per cent. The heavy growth of the importation of American harvesting machines by Russia was mainly due to the abrogation of customs duties thereon in 1898. The Americans have clever advertising methods, liberal credit offers, and grandly organized trading systems everywhere. Nowadays the American harvesters occupy a controlling position in many sections of Russia, especially in the Volga region, in the southern Ural, in the prairie districts and in west Siberia, but they have met with sharp competition from Russian manufacturers in the black soil region and in southern Russia where the combined grain harvester and hay cutter, the ‘Looegreyka,’ a cheap and solidly constructed machine of Russian make, has become popular, and is making its way into the Volga region owing to the efforts of the Semstvos (country organizations in Russia).

HOW AGRICULTURAL MACHINERY IS SOLD.

“The leading American manufacturers of harvesters have closely defined districts, in each of which there is located a general agent who employs most of his time in canvassing his district. Subagents work in defined regions under his supervision. These subagencies are mostly first-class business firms which either buy the goods outright, receiving large discounts on the scheduled selling prices, or they take the machines on commission and enjoy long credit terms and liberal commission rates on sales made. The leading American firms maintain warehouses in Russian ports from where they promptly fill orders even when such come in large proportions. These stock warehouses are also of the greatest importance in supplying extra parts. Another way American sales are promoted is by their helpfulness in the matter of repairs. The native Russian knows little about machinery. The distances to repair shops are great and the roads poor. To overcome these difficulties the American sends large numbers of young mechanics from the United States to Russia. These minute men go about in the harvest time, inspect the machines bought from their firms, and undertake any needed repairs on the spot. Frequently these itinerant workers are ordered by telegraph to proceed at once to plantations to effect repairs. This prompt helpfulness, performed by this staff of repair men, forms the best advertisement for American machines.”

The above testimony, so laudatory for American manufacturers of agricultural machines in the management of their business abroad, ought to induce manufacturers in other lines who desire to sell their products in foreign markets to adopt like modes of procedure. There is good reason to believe that like success would attend such efforts.

FARMERS BUY THROUGH ZEMSTVOS.

Vice-Consul A. W. Smith, of Odessa, reports a large trade in that consular district in the higher class of agricultural machines and implements. The disorganized condition of Russia's factory life does not indicate a speedy change in the demand. The shortened hours of labor, added to the advance in wages, make impossible the production of a machine in Russia good and cheap enough to compete with those of foreign make. The greatest trouble in the matter of the introduction of foreign machinery lies in the fact that those foreign firms, who do not send out their own agents, experience serious difficulty in finding suitable, honest, and energetic agents, who will not allow the firms they represent to become the victims of such retailing middlemen as do not enjoy a good reputation for integrity.

Many of the rural “administrations,” of which every Province has one, have of late years established special rooms or stores, where a staff of trained men exhibit agricultural machines, tools, fertilizers, seeds, etc. These “administrations,” commonly called zemstvos, also act as responsible go-betweens in the matter of the purchase of these articles, especially if the farmers are not able to immediately pay the cash.

CHAIN MAKING.

GERMAN EFFORT TO LEARN THE BRITISH ART.

According to Consul Albert Halstead, of Birmingham, for years South Staffordshire has made the best heavy chains, such as are used for anchors and ships cables, in the world.

These chains are all made by hand and tested to meet the severe British Admiralty tests. Both because of the use of the best South Staffordshire bar iron and because of the skill of the chain makers, to whom the art has been handed down from generation to generation, these chains have held their own despite the development of the iron and steel industry in the United States and in other parts of the world.

Large quantities of these South Staffordshire chains are certified at the Birmingham consulate every year for shipment to the United States. The supremacy of South Staffordshire in chain making may be threatened by German competition, through the disclosure of the secrets of the chain-cable industry to German chain makers in Duisburg by English workmen, who were brought over by the German manufacturers.

Early in the summer, through the cooperation of the chain trade and the Chain Makers and Strikers' Association, a labor organization, the six British chain makers who went to Duisburg some weeks before were brought home, the English chain manufacturers making it to their interest to return. Their patriotism was also appealed to. It was then thought that an end had come to the ambition of the Germans to learn the art of chain making from British workmen so as to enter the markets of the world as serious competitors. Since then, however, three of the British chain makers returned to Germany and the apprehensions exist lest they may teach the German workmen enough to make them serious competitors.

British chain makers admit the compliment to their workmanship so evident from German anxiety to learn the secrets of the trade, but they fear that this compliment to British industry may eventually prove disastrous, though some chain makers say they can still hold their trade even if Germany learns their secrets. It is quite possible that new efforts will be made to bring back the British workmen from Germany, but whether or not this will be successful, because of the high wages that are unquestionably paid them, is a question. The Germans who are anxious to learn the British chain-making art are said to have sought to make a five-years' contract with the chain makers who have gone to Germany, but up to the present they have apparently failed.

MINING.

GOLD IN AUSTRALIA.

STERLING VALUE OF MINES—INCREASING PRODUCTION.

Special Agent Harry S. Burrill, writing from Kalgoorlie under date of August 22, furnishes interesting facts regarding the production of gold in Western Australia. He writes:

Gold is still to be found in abundance in Western Australia and constitutes the State's chief source of wealth. Since 1891, when practically the first discovery was made, there has been a constantly

increasing output, with the exception of 1900, 1904, and 1905, when the yield fell slightly below that of preceding years.

Prior to 1898 the entire production amounted to approximately \$24,000,000, but in that year work was begun in earnest, with the result that in the succeeding twelve months over \$20,000,000 was taken out. In 1901 the sterling value of the gold mines was £6,719,881 (\$29,702,301); in 1902, £7,609,149 (\$37,029,924); in 1903, £8,335,579 (\$40,565,096); in 1904, £8,129,456 (\$39,562,008); in 1905, £7,818,612 (\$38,054,142); and up to May 31 of this year the yield amounted to £3,044,275 (\$14,814,964). For purposes of comparison, and to show the position which Western Australia occupies in the world as a gold-producing state, the figures of 1904, showing the yield in ounces of Western Australia, Australasia, the United States, and the Transvaal, are given:

	Ounces.
Western Australia.....	1, 983, 230
Australasia	4, 230, 774
United States	4, 090, 532
Transvaal.....	3, 773, 517

For several years the problem of a water supply for the gold fields was most difficult to solve, for in that territory, about 400 miles from Perth, the capital of the State, there are no rivers, few natural supplies of surface water, and the rainfall is light. The vital importance of overcoming this difficulty was recognized by the State, and some idea of the magnitude of the undertaking may be formed by the cost of the construction which amounted to over \$15,000,000. In 1896 the premier of the State obtained the approval of the legislature to an expenditure of \$12,500,000 for the provision of a supply of 5,000,000 gallons of water a day. The work was energetically pushed and brought to a successful completion in 1903. The supply, which is now regarded as adequate to the demands of the gold fields, is pumped 351 miles.

Fully 18,000 men are engaged in mining, and the wages paid are sufficiently high to induce first-class miners to remain permanently employed. In the gold fields the value of mining machinery in use amounts to approximately \$20,000,000, and there have been erected about 4,000 stamps. These figures show conclusively the splendid industry that has been built up, and all conditions now point to a continuance of the prosperous conditions.

INDIA'S MINERAL RESOURCES.

ACTIVE PROSPECTING PRECEDES ACTIVE MINING DEVELOPMENT.

The "rush for the mines of India" has not yet set in, writes Consul-General William H. Michael, of Calcutta, but he says it is safe to predict that it is not very far off. Europe and America have their scientists in the field in limited numbers prying into things, and the results due to "rich finds" are certain to follow. Mr. Michael continues:

Last year's report shows some activity. For Baluchistan there were issued 4 leases for coal and chromite. For Bengal 1 prospecting license was issued for iron in Mourbhanj, and for any minerals, metals, precious stones, especially copper ore, in Darjeeling. For Bombay Province there were issued 4 exploring licenses for gold, manganese,

and other minerals, 12 prospecting licenses issued for manganese, manganese ore, aluminum, bauxite, red ocher, copper, cinnabar, quicksilver, and gold, and 1 mining lease for coal and manganese.

AMERICAN FIRMS INTERESTED.

The licenses in Bombay were taken out by a scientific agent representing one of the largest and most enterprising prospecting and mining companies in the United States, upon whose report will depend, he informs me, whether his company's capital be largely invested in mining operations in India or not. For Burma there were issued 16 exploring licenses for tourmaline, coal, petroleum, gold, iron, tin, silver, copper, lead, zinc, rubies, precious stones, and other minerals, and 2 mining leases for gold, precious stones, and marble.

For the central provinces there were issued 17 exploring licenses, 31 prospecting licenses, and 5 mining leases for manganese, iron, stone, and coal. For eastern Bengal and Assam there was issued 1 prospecting license for coal and oil in the Khasi and Jaintia hills. For Madras Province there were issued 6 exploring licenses, 31 prospecting licenses, and 17 mining leases. For the Punjab there were issued 10 prospecting licenses.

It will be perceived by reference to the map of India that these licenses and leases authorize operations practically all over India. Indeed, it would seem that wherever hill and mountain elevations exist there may be found minerals of more or less value. As the Indian railroad system is extended, bringing these hitherto inaccessible places for profitable mining within easy reach, enterprise and capital are finding out and utilizing the rich and extensive resources of India.

Without doubt Americans will contribute their share toward this development by actual mining and by supplying the best and most thoroughly up-to-date mining machinery and equipment thus far invented. The push and resourceful ability of the Yankee and his inventions will be needed for the development of Indian mineral resources, and the quicker they get into the field the better it will be for India and all concerned.

EXPORT OF METALS.

In this connection the export of metals from India might not inappropriately be given. Manganese ore represents nearly 82 per cent of the value of all exported metals and manufactures thereof other than hardware, the residue consisting of manufactures of brass, copper, and iron. The exports for 1904-5 amounted to 180,945 tons, which is not a bad showing in view of the fact that the trade has grown up within ten years. The falling off of Russian imports, due to the disturbances in that country, gave a decided impulse to the trade, and now that India has realized what she can do in this line it is not unlikely that her metal exports will increase right along. Prior to the internecine troubles of Russia, which almost completely prostrated the work of the mines of Donets, as also those of the Caucasus, she exported 420,000 tons, all of which trade was lost.

This was India's opportunity and her metal exports shot up to 316,694 tons, an actual increase of 75 per cent, while the value rose 79 per cent, amounting to \$4,300,000. This also shows a small rise in the average value per ton of a trifle less than 11 cents, or 2½ per cent, yet it would seem that the real gain must have been larger than that,

as the price of manganese in Europe advanced in the same period by 50 per cent.

The metal exports from India go for the most part to America, the United Kingdom, and the Continent of Europe in quantity in the order named. This is one valuable and growing export of India that the United Kingdom has not cornered. The field is an open one, with America in the lead as a "taker," and there is really nothing in the way of the employment of American energy and capital in producing here in large quantities the basic metals needed in American manufactures for the supply of the world.

MINERAL OUTPUT.

During 1905 the Indian mines raised some 7,762,779 tons of coal, the largest quantity on record, but, large as it seems, it is very far below other countries, and places India ninth on the list. The total output of the principal coal-producing countries of the world, including India, is roughly 853,000,000 tons, so it is at once apparent what a poor show India makes with not 1 per cent of the total output, and what possibilities there should be in the future. Yet there is a steady increase, which is shown by the fact that the tonnage in 1899 amounted to but 4,622,242, in the raising of which were employed 65,795 persons, while for 1905 the tonnage was 7,762,779, with 80,496 people employed.

Manganese, mica, and limestone are three minerals the output of which is increasing. In 1899, 87,126 tons of manganese ore were produced; in 1903, 171,223 tons; and in 1905, 204,194 tons. Of mica, 10,860 hundredweights were produced in 1899 and 25,548 hundredweights in 1905. Of limestone, 1,177 tons were produced in 1899 and 93,176 tons in 1905.

SPAIN.

GRANT OF VALUABLE CONCESSIONS.

Consul-General B. H. Ridgely writes from Barcelona that according to recent revenue returns during 1905 the various mines and mining concessions in Spain produced a total of 7,415,919 pesetas (par value of peseta 19.3 cents), 3,458,483 pesetas having been obtained from concessions and 3,957,436 pesetas from royalties.

These figures indicate an increase of 303,755 pesetas, as compared with those for the previous year, and of no less than 2,177,570 pesetas compared with the returns for 1900, which was the year in which the existing law for the taxation of mines was first put into force. Coal mines alone are exempt from what is known as the "impuesto de explotación" according to a law promulgated in April, 1904. During 1905 the number of mining concessions was 620 less than those in force at the end of 1904. Of the total 30,041 concessions granted only 4,204 were actually worked. The total declared quantity of quicksilver, sulphur, zinc, copper, ferrocopperous pyrites, tin, iron, manganese, silver, lead, and argentiferous lead obtained during 1905 was 122,126,383 metric quintals, valued, for revenue purposes, at 135,084,771 pesetas, which would give an average value of 1.10 pesetas per metric quintal, a metric quintal being equal to 100 kilograms, or 220 pounds. This would mean 11 pesetas per ton.

TEXTILES.
MANUFACTURED GOODS.
MODERN IRISH LACE

**REVIVAL OF FINE ART IN THE EMERALD ISLE—ORGANIZATION TO
PROMOTE THE INDUSTRY.**

Consul Alfred K. Moe, of Dublin, finds that in recent years the Irish lace-making industry has revived to such a large degree, and Irish laces, real and imitation, have come into such popularity, that he believes it may be valuable for American lace makers and importers to gain an idea of what lace making and designing means to-day in Ireland. Mr. Moe therefore gives a résumé of this industry.

FIG. 1.—Modern raised needle point lace, Youghal.

Of true lace there are but two classes, "needle point," or that made by the needle, and "pillow lace," sometimes called "bobbin lace," because the threads are twined around small bobbins of bone, wood, or ivory. In both instances the whole of the fabric is made by hand, but this is not true of the Limerick and Carrickmacross lace.

In needle-point lace the pattern is carefully drawn on a piece of glazed calico—sometimes "parchment" or paper is used, but not often—and this is laid upon a piece of calico where the pattern is carefully outlined or traced by the worker with a thread. This thread is the framework or "skeleton" on which the lace is made. When the work is completed the lace is removed from the calico by carefully cutting away with a sharp knife between the two pieces. In pillow lace the pattern is drawn (preferably) on a piece of parchment. It is then pricked over by an expert and placed on a cushion. In each of the holes a fine pin is inserted, and upon the pins the threads are plaited

and twisted by means of the hands, the various methods of twisting and the arrangement of the holes resulting in the varieties of grounds and fillings.

In the making of any lace a knowledge of drawing is of the greatest importance, as much depends upon good construction and good drawing in a lace design. To this end teachers possessing a knowledge of drawing and design have been sent whenever possible to the lace centers throughout Ireland. In some of the old needle-point laces it can be plainly seen that there has been no idea of construction; each portion being independent, and there being no growth in the patterns. It will often appear as though separate portions had been taken from different designs and put together on the paper in a perfectly haphazard manner, and indeed this has frequently been done. Often a spray or two was taken from an old wall-paper design and added by way of variety. Leaves of different kinds will be seen growing from one stem, and fillings inserted without any proper idea of their value.

FIG. 2.—Old Limerick tambour lace.

All these imperfections were the result of tracing designs again and again on tissue paper by those who had never learned to draw, until the original form was lost. In any of the modern laces the difference will at once be noted. Systematic and intelligent designing is in progress at all of the larger institutions, schools, and convents. Raised needle point, or as it is called, Inishmeekins lace, is made in the schools at Enniskillen and at Cappoquin, at the New Ross Carmelite Convent, at Youghal, and at Kenmare.

A very good example of modern slightly raised needle point lace can be seen in the illustration of a cuff (see Fig. 1, p. 136). A glance is sufficient to show that there is construction in the design, that there has been no careless throwing together of the forms, but that the whole arrangement has been well planned. The general arrangement, though symmetrical, is not severe. The forms are well drawn and the small enrichments on the surfaces of the leaves and flowers are managed with judgment. Irish handkerchief designs furnish good examples of modern flat point. The corners are symmetrical and

formed on the diagonals of the square as center lines, while the diameters of the square again bisect the forms which appear in the center of each side.

Limerick lace, which is an embroidery or net, is of two varieties, "run" and "tambour." It is made in Limerick at the Dominican Convent, at Cobra, at Kinsale, and at Golden Bridge Convent. An examination of the two accompanying examples (figs. 2 and 3) will illustrate the difference between the old Limerick tambour lace and the modern. The design of the first is not unsuited to Limerick tambour work, and was, no doubt, highly prized before the days of machine-made lace. But compare it with the second example. There is no lack of variety in the second as there is in the first. The trailing arrangement of the sprays, tied with bows of ribbon, and the strings

FIG. 3.—Modern Limerick tambour lace.

of pearls combine to impart grace and lightness to the design. Large forms can not, as a rule, be well rendered in this lace, and small forms require to be separated.

Carrickmacross lace is made at the schools in Carrickmacross, at Crosseaglen, and in the surrounding district. It is of two kinds, "appliqué" and "guipure." It is not true lace, as the work, which in needle-point would be called "tight-work," and which is made with the needle, consists in Carrickmacross lace of cambric. The ground also where it is "appliqué" is a net ground.

A design of an Irish fan combines the appliqué and guipure. The shape of the fan was first laid down and the leading lines of the pattern sketched in with charcoal. As soon as the leading lines have

been arranged the designer sketches in with charcoal the masses and chief features of the design. Then with a brush and sepia the design is advanced a step further, all the forms being drawn by means of the brush. Lastly, an accurate outline is made from the sketch and forms the working drawing which is handed to the operator.

CROCHET INDUSTRY.

It has been said that Irish crochet has a peculiarly distinctive character which it is impossible to imitate on the Continent or elsewhere. Until lately one of the great obstacles to the improvement of the crochet industry has been to find workers capable of translating crochet patterns into work. Give a worker a piece of made crochet and she will have no difficulty in copying it, while she will probably find it impossible to work from a drawing. Some improvement has recently taken place in this respect. The chief centers for crochet making are Cork, Youghal, Kinsale, Crosshaven, Clones, Ardara, and several other places where it is made in small quantities.

Fig. 4 is an illustration of modern crochet lace made at Ardara. The method is the same as that used in old lace. The forms are made

FIG. 4.—Modern Crochet Lace. Ardara, County Donegal.

separately, secured in their places on the pattern, and the ground worked between them. Thought, order, method have all been at work in this design. We have the principles of alternation and radiation exhibited in this pattern. The ground is more carefully rendered than in the earlier laces, and as the ties are lighter, cloudiness of effect in the ground is prevented and greater contrast between the ground and the pattern is secured.

A collar and panel of Cork crochet afford other examples of the effect that may be obtained by good arrangement. There is evenness of distribution, the forms are well shaped, and have evidently been made from good drawings.

The improvement in the modern lace over the old is due to the energy and untiring efforts of a few persons who became interested in the Irish lace industry and, in turn, interested others. Considerable difficulty was experienced in demonstrating to the teachers and the workers that it was possible to inaugurate system in work as well as in design, and that the workers should be taught a knowledge of design. To-day in many places in Ireland work is conducted in an

intelligent and efficient manner, and the output of lace greatly excels in merit that of former years. Until lately the workers in Irish lace had many difficulties in reaching a market worthy of their work. Much of the finest lace is made by country girls who, living on farms, give to lace making only so much of their time as they can spare from labor on their relatives' farms. The guipure and appliqué of Lough and of Monaghan, the crochet of Monaghan, Armagh, and Fermanagh are in large part manufactured under these conditions. The point lace of Youghal, Kinsale, and other centers is produced in much more favorable circumstances, if by that we contemplate better rooms and a higher plane of living. There is something to be said in favor of the former mode of living, where the girls have to labor part of the time on the farm instead of working themselves into a condition of blindness by constant application to lace working.

Where the officials of the congested districts board are the guides of the workers, the marketing of the lace is duly provided for. The workers are supplied with suitable designs and instructed how to use them; their work is sent to the best markets, and sometimes they receive good pay for their product.

ANNUAL EXHIBITIONS

The Royal Dublin Society holds annual exhibitions of laces and offers prizes for excellence of design and workmanship, and so stimulates this particular industry. Much has been done to place the product systematically on the market, the Royal Irish Industries Association and the Irish Lace Depot being the chief depots for the sale of Irish laces. Lady Aberdeen, during the period that the Earl of Aberdeen was lord lieutenant of Ireland, and during the twenty years since then, has interested herself in the practical and successful development of the industry, and much of the success of lace making in Ireland to-day may be traced to the activity of her ladyship.

To cooperative societies and to other organizations of lace workers the Irish Lace Depot supplied designs. From these societies and from the schools of the congested districts board it took the lace, when manufactured, at market prices, and sold it in the best markets accessible, and, after defraying expenses and providing for the interest on borrowed capital, gave the workers (in these societies) a bonus proportionate to the value of the lace they had supplied. It furthermore paid the salary of a teacher for those organizations which were unable, without this assistance, to procure competent instruction in lace making.

The committee of the Branchardiere fund devotes the whole of the income arising therefrom to the following purposes: It gives aid toward the cost of trial pieces of lace made from new designs, it gives rewards to the workers of those pieces of lace that took prizes at the Royal Dublin Society's Exhibition, it gives grants to enable lace mistresses and workers to obtain technical knowledge in lace making, drawing, and design, and it makes purchases from the designs exhibited at the Royal Dublin Society's show, for the purpose of giving those designs to the lace makers. This assistance was in the early years invaluable, and the excellent effect of the various other schemes to further the progress of Irish lace making may be readily recognized in the product which leaves the workers at this time, and which is in demand in various parts of the world, and especially so in the United States.

GERMAN LACE INDUSTRY.

VALUE AND DISTRIBUTION OF EXPORTS—CONDITIONS IN THE TRADE.

Consul Carl Bailey Hurst writes that the United States takes a large share of the German lace and embroideries made in Plauen.

In 1904 the value of laces and embroideries exported by Germany to all countries approximated \$22,848,000, and in 1905 the amount rose to \$28,084,000. During the past three years an average of 68 per cent of the total of German laces and embroideries was sold to the United States and Great Britain. America bought generally medium qualities, the British bought all grades, France the finest qualities, while considerable shipments of various kinds were sent to the Orient as well as to Canada.

The declared exports of lace and embroidery to the United States from the Plauen consular district was \$2,944,255 in 1903, which increased in 1905 to \$4,243,915. The exports to South America also increased appreciably, Argentina taking \$315,825 worth in 1904, an increase of 50 per cent over the previous year. Brazil took double the amount, \$275,604 worth, Chile took \$106,148 worth, while Colombia, Uruguay, Peru, Venezuela, and Bolivia also took large amounts.

The number of machines for making lace and embroideries in the Plauen district last year comprised 3,300 hand machines, 7,000 shuttle machines, and 300 automatic shuttle machines. There was a decrease of about 1,000 hand machines and an increase of about 6,000 shuttle machines during the past fourteen years. The number of persons employed, according to last year's statistics, was 22,613.

SCOTCH TWEED INDUSTRY.

METHODS OF PRODUCING HOMESPUN IN TEXTILE MILLS.

Consul Rufus Fleming, of Edinburgh, points out the marked changes that have taken place in the Scotch tweed industry. He writes:

In 1891 there were 108 woolen mills in Scotland devoted mainly to the manufacture of tweed cloth. The number has increased to 125, but many of these mills now manufacture other classes of goods more largely than they do tweed; such as flannel suitings, which are more cheaply made, the yarn being looser and lighter, and the process involving no milling, coping, darning, birling or tentering, as the goods require only to be scoured and pressed after coming from the looms. Scottish mill owners entered upon this branch of the woolen trade chiefly because Yorkshire had become a formidable rival of south Scotland in the production of tweeds. The advance of the Yorkshire mills in the tweed industry in recent years has been rapid. Statistics of tweed manufacture in both countries or either country can not be obtained, but it is known to the trade here that of the total production of so-called Scotch tweeds in Great Britain fully three-fourths (in quantity, if not in value) are now made in England.

The Yorkshire mills make principally the cheaper grades. In economy of production they have gained a better position than the majority of Scottish manufacturers. They have great plants, equipped with the largest power-looms, and, as a rule, one weaver in Yorkshire does the work of two weavers in south Scotland. As a result of competition, the efforts to reduce cost and secure cheapness of product

have carried not a few manufacturers to the length of resorting to the use of shoddy. Not only are wool waste and cotton used in their mills, but old woolen garments, etc., are "deviled" by machinery, the fiber is mixed with wool, and this combination goes through carding machines and finally into the looms. Shoddy tweeds have been made in both England and Scotland for some years, the larger proportion south of the Tweed. Only moderate quantities of these goods enter into the home trade, jobbing and retail, the bulk going to wholesale clothing manufacturers and to foreign markets.

SHODDY TWEEDS AND MACHINE-MADE HOMESPUN.

Connected with the shoddy abuse is the "homespun" artifice. As applied to tweeds and other woolen goods, the word "homespun" has come to mean simply an imitation of homespun cloth. It is so understood in the trade. At the present day the quantity of genuine homespun goods on the market is inconsiderable. There are mills that turn out nothing but "homespuns." It is within bounds to say that nine-tenths of the "homespun" tweeds, of various descriptions and with local names, are produced in mills in the usual way. Shetland "homespuns" are no exception to the rule. Large quantities of Shetland wool are sent to mills in Scotland to be spun; the yarn goes to other mills to be made into cloth, and the cloth goes to Shetland or into English and Scottish woolen marts and is sold as Shetland "homespun" tweed.

I do not desire to create the impression that the tweed industry in Scotland has degenerated into a struggle to produce cheap goods and sell them under false names. That would be far from the truth. Most of the important firms adhere to a high standard of quality. Unfortunately those manufacturers, English and Scottish, who use shoddy, cotton, etc., are making it more and more difficult for the producers of sterling-grades of goods to maintain prices at a profit-earning level. It seems only just to add that some of these latter firms are not wholly blameless, inasmuch as they have given countenance to the "homespun" deception, which may have had a strong influence in developing the practices that now seriously interfere with legitimate trade.

IMPROVED NOVELTY WEAVING.

NEW FRENCH LOOM DISPENSES WITH CHECKERED CARDS.

Consul Chapman Coleman reports from Roubaix that a new invention by two young Frenchmen, Louis Parmentier and Henri Dutat, students of an industrial college at Tourcoing, has recently been the subject of much local discussion, and the claim is advanced that it is likely to lead to a veritable revolution in mechanical weaving.

The invention contemplates the suppression of the use of checkered cards in revolving looms. At present, in the weaving of stuffs having varied wefts, the employment of special cards for effecting a change of shuttles is indispensable. Manufacturers have been compelled to conform to the present system for want of a better, notwithstanding its evident inconveniences, one of the least being the considerable and continuous expense caused by the introduction of a new set of cards whenever a change of shuttles becomes necessary. Another incon-

venience much complained of and highly prejudicial to the operator arises from the encumberment of the loom by the same set of cards. The sustained efforts and ingenuity of the inventors appear to have resulted in the discovery of a system permitting the suppression of these troublesome checkered cards, and their replacement by a perforated metallic ribbon mounted on an extensible wheel. The ribbon thus forms a disk which will serve for all kinds of shuttle work, whatever the number of shuttles to be employed and the number of picks.

A GREAT SAVING OF EXPENSE.

The advantages to be gained by such an invention are readily perceived. In the first place, its application would result in a great saving of expense to its employer, for the reason that, once mounted, it would serve indefinitely for all species of designs and simplify hand work. It would also increase rapidity of production. The benefit of this improvement would be especially felt in the manufacture of samples of high novelties and fancy goods where, as often occurs, the operator must change the shuttles repeatedly. The changes in the case of the new invention operate with such rapidity that practically the movement of the loom is not arrested at all, and it would therefore be possible, by means of replacement collars, to effect modifications of designs even while the machinery is in motion. Use of the new system would conduce greatly to more perfect work and the avoidance of faults. Virtually the weaver, instead of being encumbered, as heretofore, by the ascending and descending series of cards, by rollers, and by boxes, would immediately have visible before him some three-quarters of his design and would be able to devote greater attention to his work.

It remains to be seen whether this invention, when practically applied, will fulfill present expectations of good results. Meantime, the data given in this report should be found interesting by inventors and others in the United States who have expert knowledge of textile machinery and are interested in the manufacture of textile goods. It is not practicable at present to supply further details respecting this invention. Such additional information respecting the matter as may become available hereafter will be duly communicated.

RUG MAKING IN INDIA.

AMERICAN OPERATIONS IN PRODUCTION OF FLOOR COVERINGS.

Consul-General William H. Michael reports from Calcutta that American enterprise within the last few years has given quite an impetus to the manufacture of rugs in India.

In 1905-6 there were manufactured in India and exported carpets and rugs to the value of \$1,900,000, of which \$1,500,000 in value went to the United Kingdom and \$400,000 in value to the United States. Most of the finest rugs that were shipped to the United States, of Indian manufacture, were made in factories controlled by American capital. One firm alone controls ten factories, one each in Kashmir, Hyderabad, and Sikkim, the others being scattered over two-thirds of India. This firm employs 15,000 people, half of whom are females engaged in spinning and the other half on the hand looms.

Practically all of the rugs made by this firm are manufactured on designs that were worked out in the United States, and are intended to meet the American demand. The colors used are indigenous, purely vegetable, and are prepared upon formulas that have been handed down for centuries from father to son. This firm would be glad to do their manufacturing in the United States, but it has been found to be impossible to induce any considerable number of expert rug makers to emigrate to the United States even if there were no legal difficulties in the way, and it is impossible to induce Americans to engage in making rugs by hand as they are made in India, so that it should be a matter of genuine pride to Americans to know that their countrymen are leading in the enterprise of rug making in India and are the first to enter the domain of Tibet to engage in manufacturing.

AMERICAN DESIGNS.

While the rugs are not of purely oriental design, yet to a cultivated taste they are much more artistic than the oriental rugs. This firm, however, is able to imitate the antique oriental design so perfectly that the only difference discernible to the average person would be possibly the higher finish of the imitations. There would be the same number of knots to the square inch, the same colors, prepared of the same ingredients, and the same designs, and the work would be done precisely in the same way that the oldest rugs were made.

The rugs for the United States trade are mostly made on designs prepared by American artists. The carpets and rugs sent to the United Kingdom are made by natives, who sell to brokers for export. Some of these goods find their way through London into the American market, and are offered for sale as superior Indian rugs, which they are not. As a matter of fact, this class of goods has greatly injured the reputation of Indian rugs, than which, when made under the scrutiny of American superintendents, and as the Indian rug makers delight to make them, no finer or more durable ones are made anywhere.

AMERICAN TEXTILES IN CHINA.

MOVEMENT TO SUBSTITUTE NATIVE FOR FOREIGN GOODS FAILS.

Consul T. Haynes, of Nankin, thinks there is no good reason for American merchants and manufacturers to fear competition in the markets of China. All that is needed, he says, is steady efforts to enter new Eastern markets just as fast as they are opened and to put forth every legitimate effort to hold what have been secured. He writes:

In the Returns of Trade, issued by the imperial maritime customs, all imports are classified under six headings—metals, sundries, opium, cotton goods, woolen and cotton mixtures, and woolen goods. The last three embrace all piece goods that are commonly shipped to the different Chinese ports, such as gray and white plain shirtings, drills, jeans, chintzes, cotton prints, flannels, and yarns. The number of pieces of each of these imported for the last three years is as follows:

Kind of goods.	1903.	1904.	1905.
Shirtings, gray, plain:			
American	8,975	5,780	23,311
English	81,938	67,815	107,222
Sheetings, gray, plain:			
American	5,900	11,350	180
English	41,642	38,331	40
Shirtings, white, plain	17,257	20,785	23,740
Drills, American	29,955	26,865	26,661
Jeans, English	8,506	11,156	13,430
Chintzes and plain cotton prints...	5,464	3,747	3,659
Cotton Italians:			
Plain fast black	5,864	9,080	8,814
Plain colored	4,006	2,336	4,561
Cotton flannel:			
Dyed and printed	3,631	6,109	2,981
Japanese dyed and printed	980	414	289
Striped	1,806	1,160	842
Japanese, striped	770	240	.....
Cotton yarn, Indian (in piculs)	8,390	3,327	8,226
Woolen Spanish stripes (in yards)	10,820	13,065	11,549
Woolen cloth, broad (in yards)	8,815	5,931	7,852

AMERICAN GOODS VS. ENGLISH GOODS.

The comparative difference between American and English plain gray shirtings is very noticeable. The former rose from approximately one-tenth of the amount of the latter entering in 1903 and 1904 to more than one-fifth of England's last year's import. The great falling off in sheetings is due to the boycott, the natives substituting their own goods, of which they produce a great quantity, but of an inferior quality. Shirtings, drills, chintzes and cotton prints were little affected, as, possessing no substitute of their own, the Chinese still bought them. No jeans are imported into Nanking from America.

There has been opened up in Nanking recently as many as a dozen new native stores which deal exclusively in foreign piece goods, not only such as the coarser cotton drills, sheetings, etc., but the finer gauzes, lawns, silks, satins, flannels, light and heavy woolen cloths, brocades, muslins, brilliantine, velveteens, ginghams, plain and printed piques, prints, crêtonnes, and sateens. This latter has largely supplanted the Nanking black satin trade, the reason being that the Chinese black satin fades, while the foreign sateens look almost equally as well, cost considerably less, and have the superiority of retaining their luster and color.

Formerly it was the practice in Chinese piece-goods shops to have all pieces carefully and separately wrapped, intending purchasers being compelled to buy by sample and verbal description without seeing the goods. This, until recently, had been the custom for centuries. At present, however, all pieces are displayed on shelves, and buyers are allowed to satisfy themselves both by ocular and tangible proof as to the quality of the goods.

SPANISH TRADE.

PROSPEROUS CONDITION OF COTTON MILLING.

A report from Consul-General B. H. Ridgely, at Barcelona, says that the past season in the Spanish cotton trade has been a more prosperous one than has been known for several years.

With the exception of the months of September and October, 1905, when the demand fell far below the average, owing to the poor prices

obtainable for yarns, preventing spinners from paying the prices then asked for the staple, the remainder of the season showed an active demand all along. Prices, however, have not been very remunerative, owing to slight overproduction, and also, according to some authorities, to the depressing influence exercised on the market by the sales of certain small spinners. On the whole, however, as already stated, the season of 1905-6 may be considered as a fairly good one for the Barcelona cotton industry. A slight increase in the quantity of machinery is also recorded. The splendid general crop prospects in this country further point to another prosperous season for manufacturers.

The following number of bales were imported into Barcelona for the season 1905-6: 237,640 American, 21,245 Egyptian, 46,085 East Indian, 11,203 Smyrna, and 10,675 sundry, or a total of 326,848 bales. The highest price realized for "good middling" in this market during the season of 1905-6 was on December 7, 1905, when it reached 106.60 pesetas, equal at that time to \$16.10 per 110 pounds; the lowest price during the same season was on July 27, 1906, when it sold as low as 83 pesetas, equal to \$14.39.

COTTON DUCK IN AFRICA.

LARGE DEMAND CREATED BY ACT OF PARLIAMENT.

C. M. Knight, vice-consul-general, of Cape Town, writes in reply to letters asking about South Africa as a market for cotton duck. He also sends the names of several dealers and agents, which are on file in the Bureau of Manufactures. He says:

It was stated by a firm that handled large quantities of American-made cotton duck, and verified by a call at the Agricultural Department, that a large demand was created recently for this article by an act of Parliament compelling fruit growers and nurserymen to clean their trees from scale insects. The cyanide gas remedy is recommended by the Government entomologist. This necessitates a covering for the tree in order to fumigate it successfully. The same firm stated that, while there is practically no difference in price of English and American made cotton duck, they find the American preferable, owing to the manner in which it is woven—the woof of the English make not running even and consequently the duck not cutting straight as in the case of the American manufactured article. This is thought to be a very strong feature in favor of the American article.

A successful way to introduce duck into this country, and one which has proved the most satisfactory both to importer and manufacturer, is to place samples in the hands of a representative or agent who would make a personal effort to secure orders.

EUROPEAN COTTON SPINDLEAGE.

GREAT BRITAIN LEADS IN THE INDUSTRY.

The International Federation of Master Cotton Spinners and Manufacturers' Associations recently issued in London a census of spinners' stocks and the consumption of cotton during the year ending August 31 in the nine principal countries of Europe. The number of spindles covered by the returns each year steadily increases. In August, 1905, the spindles included numbered 46,720,000; in February, 1906, they

had increased to 54,297,000, and in August, 1906, to 66,072,303. Waste and doubling spindles were excluded. Great Britain had 41,885,774 spinning spindles and consumed 3,358,708 bales of cotton and had a stock on hand of 386,356 bales. Germany had 8,864,618 spinning spindles and consumed 1,622,004 bales of cotton and had a stock on hand of 339,711 bales. France had 6,402,657 spinning spindles, but consumed only 890,112 bales of cotton. Austria consumed 644,364 bales and Italy 541,774. It is estimated that in Europe there are 77,115,125 spindles.

COTTON STAPLE.

AMERICAN FIBER ABROAD.

BALES ARRIVE IN JAPAN IN VERY BAD CONDITION.

In response to an American request, Consul Hunter Sharp, of Kobe, furnishes an illustrated report on the condition in which American

FIG. 1.—Bombay cotton in Kobe.

cotton reaches Japan. The photographs he sends tell the story, which is simply another chapter of bad packing in this country for the export trade. Daily Consular and Trade Reports has already published similar pictures of how American cotton arrived in Europe and of broken-up bales of American manufactured goods as they arrived in China and other foreign countries. Possibly in time exporters will learn to pack better; they would learn it now if they will but examine these contrasting pictures with a full realization of what it means in the future in making sales abroad. Mr. Sharp writes:

The Bombay cotton is the best packed of all that comes to this market. The bales are of a uniform weight of 400 pounds, and it is sel-

dom necessary to weigh more than 10 out of every 100 when taking delivery. They are wrapped in a good quality of sacking and arrive without being torn or damaged, and the marks are plainly legible. Illustration fig. 1 shows the shape in which Bombay cotton arrives in Japan.

In strong contrast with the bales from Bombay is the condition in which cotton from the United States reaches this country. See illustration fig. 2. The sacking is a very coarse kind of gunny, which is easily torn in transit, and as there is no protection by sheds at the places of packing and transshipment, the cotton generally receives much damage from the weather. As a consequence the marks are always indistinct and are frequently entirely obliterated.

Another point which militates against American cotton is the great variation in the weight of the bales. Uniformity in this respect is very desirable, as it greatly facilitates the estimating of space required for storing and lightering. Sheds have been erected at this port for

FIG. 2.—American cotton in Kobe.

the storage and handling of cotton by the Tokyo Warehouse Company in conjunction with the dealers in cotton. This company has three sheds with a ground floor space of 3,136 tsubo (111,592 square feet), two brick warehouses covering 1,152 tsubo (40,993 square feet), two piers for lighters, each 36 by 72 feet, and has also built $2\frac{1}{4}$ miles of railroad track in the compound.

IMPORTANT FEATURES OF FOREIGN TRADE.

The mode of packing American goods for the foreign market is in most cases inadequate, and much trouble is experienced in consequence by the transportation companies as well as by the consignees. One of America's largest exports—raw cotton—arrives here in more or less damaged condition and with the marks generally indistinct and frequently obliterated. This is due to the inferior quality of the sacking and want of shelter at the places of baling and transshipment. Recently commodious sheds were erected at Kobe exclusively for the

storage of cotton. Uniformity in the weight of the bales is desirable, thus rendering it easy to estimate the space required in storing and lightering. Bombay bales, being of uniform size and weight, have the advantage; it is necessary to weigh ten out of every hundred upon delivery. They arrive in good condition, neatly wrapped, with a good quality of gunny, and with legible marks.

BAD PACKING NOT LIMITED TO COTTON.

American wheat and flour arrive in good condition, with ordinary care and handling. In shipping wheat it might, however, be advisable to include 1 to 2 per cent of empty sacks to enable those damaged in transit to be replaced promptly. In flour, strong single Hessians carry fairly well, but double sacks are preferable. Care should be taken that the trucks used in conveying these goods to the seaboard are clean, as otherwise the bags arrive in a dirty and unattractive condition.

Complaints are also made of the inferior packing of other American goods, such as machinery, a large and growing export, the cases being made of too light material, with the nails not strong enough to bear the strain of the rough handling during a long voyage. Machinery from Europe arrives in strong cases, the lumber employed being 1 and 2 inches in thickness, bound with heavy iron bands, the ends being supported top and bottom by cleats, connected with short bands of iron around the sides. Other articles from Europe, such as piece goods and articles of clothing, are packed in cases made of $\frac{3}{4}$ -inch boards. Inside of the water-tight tin lining, which fits the case closely, is placed heavy wrapping paper. The articles are made up in attractive packages or pasteboard boxes. American exporters in their own interest would do well to consider the foreigner's methods of packing.

BRITISH COTTON GROWING.

PROGRESS OF CULTURE IN THE COLONIES.

At a meeting of the council of the British Cotton Growing Association at London the middle of October it was reported from Lagos that since the beginning of the year 5,078 bales of cotton have been dealt with in the association's ginneries, as compared with 2,341 last year. Cotton is still coming forward in quantity. The new road from Ibadan to Oyo is now ready for motor transport, and it was decided, in accordance with the urgent request of the governor, Sir Walter Egerton, to erect a steam ginney at Oyo, at a cost of \$12,500. This, with the plant already ordered, will give a ginning capacity in Lagos for next season of 18,000 bales.

It was reported at the meeting that in northern Nigeria cotton is also coming forward in large quantities and is of very good quality. As to ginning plants, the total expenditure now authorized for next season's crop in west Africa amounts to over \$100,000. It is probable that next year at least \$250,000 further will be required, and probably \$500,000 in 1908. From east Africa it was said there is every prospect of a large supply of superior cotton of Egyptian type being received in the near future. In British central Africa arrangements have been completed for the African Lakes Corporation to act as agents for the association to buy all cotton grown by the natives at a fixed price.

BRITISH COMMISSION PROPOSE TO BUY COTTON LAND.

The report of the private commission appointed by a number of the leading cotton firms in Lancashire, England, to visit the cotton-growing area of the United States has recently been issued.

The members of the commission say that the Americans hope to form a gigantic trust to control the cotton produce market through the control of the production of cotton. They declare the people of England do not realize to what an extent the Americans are attracted by the trust principle. They point out that, "the antidote to a trust that is squeezing the life out of an American industry seems to the Americans to be in the formation of a stronger trust. So the trust-ridden planters appear to aim at the removal of the evil by the addition of another."

The members of the commission say that they were often pressed to throw in their lot with the planters and become cotton growers themselves, thus imitating the example of some planters who are investing money in cotton mills and declaring their intention to build sufficient mills to use all the cotton grown, if an ungrateful world should hesitate to pay for it at the rate of 11 to 15 cents a pound. The commission suggests that the English spinners become interested in the production of cotton, which they say can not be regarded as hazardous, provided a competent manager and suitable land at a reasonable price, with sufficient labor, can be obtained.

They recommended that a committee be appointed immediately to consider the advisability of buying land. This second commission has been sent to the American cotton fields invested with greater powers and it is said will buy land and inaugurate cotton growing experiments.

BRITISH GUIANA.

CHEAP LANDS—COTTON CULTIVATION.

The governor of British Guiana stated in London recently that the sugar industry must be regarded as the backbone of the colony, and that until the natives gave continuous labor the immigration of East Indians must continue.

Referring to small holdings, he pointed out that the acquisition of land under the present regulations was by no means a costly matter; a homestead of five acres could be obtained for \$2.50, and 100 acres for \$52.50, such charges being sufficient only to cover the expenses to which the Government was put in respect to surveying the land, etc.

Referring to minor industries, the Governor said that the number of industries which could be undertaken was dependent on the population, and that the population at the present time was roughly 320,000, of which number 90,000 were resident on the sugar estates, and that the rice industry, which had an assured future, absorbed a large number and would absorb still more, as it was developing very rapidly. The cultivation of cotton had not been overlooked. It had unfortunately been proved that Sea Island cotton was not a commodity which could be as satisfactorily grown in British Guiana as in other places, but every attention was being turned to the possibility of cultivating other kinds.

EGYPT.

COTTON SHIPMENTS FOR YEAR.

The total shipments of cotton from Egypt for the year ending September 1 aggregated 798,015 bales, against 842,990 in the previous season, a decrease of 44,975 bales. Of the total, 389,338 bales have gone to England, against 399,458 in the previous year; 69,478 to America, against 80,440; 332,520 to the Continent, against 349,659; and 6,679 to Bombay and Japan, against 13,382. America has taken only about 8½ per cent of the total, against 10 per cent in the previous year. As regards the Continent Russia has practically maintained its previous year's taking, and there is a large increase in shipments to Venice and also to Marseille, the latter port making a high record. Another feature is the shipment of 12,000 bales to Holland. Japan has taken a smaller quantity than in any season since 1900-1901.

JUTE IN INDIA.

PROBABLE HIGH PRICES FOR THE FIBER.

Consul-General W. H. Michael thinks the position of the jute mills in India is peculiar.

Some are making and some are losing money. Mills that were far-sighted enough to carry over a fair stock of jute from last season are all right, and are earning handsome profits, running as high as \$200,000 per month. But those concerns which have no jute except what they buy at present high prices are losing right along on the manufacture of heavy goods. The Arathoon Mills, during the first half of the year, earned a profit \$180 per loom, while the Hooghly Mills lost \$70 per loom. The statement is made, however, that a majority of the mills have made substantial net earnings during the above period.

It might be well for American mills to have their representatives keep a sharp lookout for raw jute of the new stock, and to take advantage of the best market. The "jute sharps" in Calcutta look for keen competition and consequent high prices during the coming year. The Government forecast of the jute crop will be due about September 22, and not until then will it be known approximately how prices will range for this commodity.

IMPORTANCE OF CROP TO SCOTLAND.

The Glasgow, Scotland, Herald, speaking of the jute crop, which is of great importance to Scotland, estimates that it will reach in India at least 9,000,000 bales, and will be the largest on record. Jute has increased in quantity and price at the same time. Last year the crop was a record one, and this year it is expected to be greater still. The Herald says that "jute growing on a great scale by large farmers does not seem to pay at all." Indian experts think that the industry will be most lucrative and successful if left as at present to the small cultivators. Complaints are made that the quality of the fiber is deteriorating. One-fifth of India's exports are of raw jute and jute manufactures. Of the 14,581,367 hundredweight (British, 112 pounds) exported in 1905-6, the United Kingdom took 6,298,246; continental Europe, 6,107,193; and the United States, 2,012,851 hundredweight.

REMARKABLE INCREASE IN MATERIAL AND PRICES.

A letter in the London Times, from India, states that in the sphere of commerce it would be difficult to find anything more remarkable than the recent expansion of the jute trade. Prices have risen to an unprecedented height, and yet the demand has continued.

Jute has not been made dearer by any diminution of the supply, as the production of the fiber has increased; it is solely the other great factor in price, an enhanced demand, that has sent up this cheapest of raw materials to the figure which almost suggests dearness. The exports of raw and manufactured jute in 1905-6 amounted to nearly one-fifth of India's total exports. The crop last year was a record one and the present season's crop will be drawn from 3,271,400 acres as against 3,167,650 acres last season.

The consumption of India increased last year to 721,350 tons as against 556,950 tons in previous years. During 1905-6 the average price per bale of 400 pounds was nearly \$15, an enormous advance on the prices for the previous five years. It is reported that the recent high prices are due not merely to the demand, but also to the general desire to restrict the market of the fiber to a shorter period. The advance over last year's prices was over 50 per cent.

Fraudulent watering of jute, which not only illegitimately increases the weight, but also impairs the value of the fiber, has become almost universal with the extraordinary rise in prices. There is deliberate adulteration besides, but owing to the keen competition, which forces the mills to buy the fiber with all the defects or shut down, the purchaser takes wet and sanded jute with his eyes open. The price of jute was 43 per cent greater last year than in 1901-2. The increase in price last year alone was 31 per cent. About 2,500 new looms are being put in during the present year.

TEXTILES FOR EXPORT.

CONDITIONS IN THE COTTON GOODS TRADE.

Reports vary concerning export trade, more inquiry seeming to have come for shipments to the Red Sea ports than to other portions of the Orient, says the Dry Goods' Guide, with little or no improvement in Chinese demand for drills or shirtings. Appropriate to the lull in our cotton-goods trade with China, it is reported in Worth street that some of the mills that gave large attention to sheetings, shirtings, and drills for export are changing their looms and taking up the production of the lighter goods now in unsatisfied demand in our own country.

FOODSTUFFS.

WORLD MEAT TRADE.

GERMANY.

ADVANCING PRICES AND IMPORTATIONS—EUROPEAN SHORTAGE.

Consul William C. Teichman, of Eibenstock, shows Germany's increased dependence on foreign food supplies by the following statistics, which demonstrate the unchecked increase in importations of meats, bacon (classed with meats), lard, and oleomargarine during six months of high prices—first half of 1906—and the enforcement of a tariff highly protective to agrarian interests:

Imports, January 1 to June 30.	Pounds.	Increase over 1905.
Beef:		
Fresh	22,888,878	4,750,693
Plain prepared	13,208,200	7,289,069
Pork:		
Fresh	19,542,455	13,963,495
Plain prepared	4,843,727	1,112,662
Hams	2,382,511	803,136
Mutton	274,032	119,710
Bacon	15,021,483	7,895,995
Total meats	78,160,786	35,934,760
Lard	138,686,315	18,834,339
Oleomargarine	26,295,366	2,102,086

This large increase of 35,934,760 pounds in meat imports over the corresponding months of 1905, and in lard of 18,834,339 pounds, stands in contrast with the gain in meat imports of 1905 over the whole year 1904 of about 44,092,000 pounds. An idea of the increased demand for meat in Germany can be formed by considering the fact that this very increase of 44,092,000 pounds occurred during a year when the quantity of meat obtained from killings in Germany exceeded that of the previous year by about 154,322,000 pounds.

It is evident that the domestic supply does not fill the rapidly growing demands for meat in Germany, and only recently the Münchener Allgemeine Zeitung, a leading German newspaper, supposed to be in touch with Government circles, in a discussion of the vexed meat problem ventures the following admission: "According to the most reliable information the conditions prevailing at present still show that the production of useful cattle for killing (the German definition of the term cattle including swine, mutton, etc.) has gone back rather than advanced, while the meat demand from the population is rapidly increasing." Continuing, the article predicts prolonged high prices on the one hand and on the other hand announces disinclination

on the part of the "United German Governments" to again open the doors to foreign cattle and meat, emphasizing the sanitary necessity of continued restrictions now exercised so stringently: In this connection it may be stated that these agrarian interests look with great expectations to a still stronger control of the domestic market prices for meat at the end of the present agreement between the United States and Germany suspending the enforcement of the new tariff against importations from the former country until June 30 next.

STILL HIGHER PRICES.

The upward tendency of meat prices in Germany has been steady for the past two years, as shown by the following figures on bovine-cattle prices prevailing at the four largest slaughterhouse centers of Germany during September 1904, 1905, and 1906, to which is added the 1906 August scale of prices to illustrate the large rise brought about within one month. The figures given represent 50 kilograms or 110.23 pounds and relate to the cheaper and the higher grades:

	September.		August, 1906.	September, 1906.
	1904.	1905.		
Berlin.....	\$6.19-\$10.71	\$6.66-\$11.42	\$6.43-\$12.14	\$7.62-\$13.33
Dresden.....	6.66- 9.52	9.04- 10.95	8.57- 10.71	8.81- 11.42
Hanover.....	6.90- 10.47	7.14- 10.71	6.90- 12.14	8.33- 13.09
Stuttgart.....	5.47- 10.95	6.90- 11.66	8.33- 11.19	8.57- 11.19

At other slaughterhouse points—Breslau, Chemnitz, Magdeburg, Hamburg, Elberfeld, Cologne, Munich, and Nuremburg—the highest prices all went up, in some instances 71 cents per 50 kilograms, during the present month. At a few cities, like Dortmund, Essen, Frankfurt on the Main, and Mannheim, prices remained stationary, and only at Dusseldorf was a small reduction recorded. On the whole the upward tendency appears to be strong enough to hold the present gains in prices all over Germany. Conflicting statistics are presented by the advocates of the maintenance of the present barriers to increased importations—embodied in the new tariff and in exceedingly stringent cattle and meat inspection methods applied with restrictive force against importations—and opposed to these by the anti-agrarian interests, which seize upon these high meat prices as an argument for the revision of the tariff on meats and encouragement of foreign competition for the sake of lower prices.

IS WORLD FACING A PORK SHORTAGE?

While per capita calculations are produced, claiming to prove a reduction within the last twelve months in consumption of meat in Germany, amounting to 4 pounds per capita, or 16 per family of four members, attention has been called to the fact that the reduction has principally taken place in the consumption of pork. American Consul Brittain dwelt upon this fact in a recent report, stating that during the first quarter of the present year the greatest decrease was shown in the consumption of pork per capita, falling within one year from 11.59 pounds per capita to 10.07.

It appears that the pork feature is the worst part of the present German meat situation, and because of its international aspect is receiving serious attention from agricultural economists. The agrarian interests, in their effort to justify the gradual rise of the pork price

from \$13.58 in 1904 to \$18.21 per 50 kilograms live hog in 1906 (August), point to it as an inevitable international drift. They call attention to the fact that southeastern Europe is not the "motherland" of the hog any more and that the latter's market price is no longer determined in that section of the world. Italy and France have no influence on hog prices to-day, because they can barely supply their home demand. Switzerland, Spain, and Norway were compelled to import, and there were only two countries left in Europe to-day able to export at all, these being Denmark and Ireland, each of which send about 1,500,000 pieces of swine out of their country every year, all going to England. This anomalous situation enables them to emphasize the commanding position occupied to-day by the United States. They recall the international meat scarcity in 1902, and claim that it was utilized by American controlling interests to drive the price of the hog and correspondingly of lard to big profits.

All these arguments lead up to the prediction that in the near future the immensely growing United States will absorb its own entire hog production and the steadily growing price, now already controlled in a measure by the Americans, will reach fabulous figures. All of which is to justify the high price demanded in the German market by the agrarian.

WARM CONTROVERSY IN GERMANY.

The arguments of both advocates and opponents of the present high duties on meats agree in pointing to the "American competition" constantly, one side hoping for a resurrection of Germany's former agricultural independence, the other declaring all such hopes as futile because of the industrial development of the fatherland, which could not be turned back to conditions Germany had outgrown.

Hence these anti-agrarian interests desire a speedy removal of all impediments to foreign competition in the German meat market, in order to lower the high figures now paid. The executive committee of the German Butchers' Association, at their recent convention, was authorized to petition the German Government for the following immediate changes in the laws: (1) Admission of Danish bovine cattle under the same privileges enjoyed by Austria at present, viz: No quarantine and no tuberculin test; (2) admission of bovine cattle from Holland; (3) admission of hogs from France for the cities of Strassburg, Metz, Hagenau, and some larger cities in Baden; from Holland for all slaughterhouse cities of the Government circuit of Düsseldorf, Cologne, and Aix la Chapelle, and from Denmark for the slaughterhouse cities of the district bordering on the north and on the Baltic Sea. Finally, as the least to be demanded and considered most urgent: (1) The adoption of forced "declarations" for foreign lard and fat (speisefett) and for such goods for the manufacture of which these articles are used; (2) prohibition of the importation of barrel meat; (3) prohibition of the use of foreign canned meat for the navy, marine, and all ships. An explanatory résumé accompanied these resolutions when presented recently to the Imperial German Chancellor.

The same organization recently addressed a petition to the Prussian minister for agriculture declaring that the German hog supply is suffering considerably from overfeeding and bad treatment, causing degeneracy and rendering the hogs very susceptible to epidemics. The petition demands stringent measures of reform in this direction, and wants to

have all hogs branded, so as to show where they come from. Furthermore, it calls for an extension of meat inspection to slaughtering done in private houses and asks for stable inspection and "control" at the expense of the cattle owner.

FURTHER PRESSURE ON GOVERNMENT.

Another petition desires that all pork or hogs coming from Russia should only be given to members of the Butchers' Master Union, viz, such members as keep an open shop and have the right to the "Master" title.

Various meat-trading organizations and consumers associations are bringing pressure to bear on the Government in the direction of lower duties on meat, and the press is giving the subject much attention. However, there are no indications at present of any changes of this kind finding favor in Government circles.

Regarding American sales of meat and lard in Germany, it may be well to emphasize that the present reformation of packing house conditions in the United States is viewed with general approbation by the multitude of German consumers of the American products. All that is necessary for American exporters to hold and enlarge the present markets is to thoroughly familiarize the consuming public, in addition to the agents in the big cities, with the rigid and successful inspection and purification now going on in the American packing houses. No better advertisement than such literature judiciously circulated, together with vigorous drumming by German-speaking representatives, is necessary for the success of American meat in this market, a large one, because of German dependence on foreign foods for the sustenance of its industrial population.

PRICES OF FARM PRODUCTS.

Consul J. I. Brittain, of Kehl, writes of German conditions in regard to farm life and products as follows:

The new German tariff is said to greatly please the shopkeepers in small German towns as well as the farmers, because it is giving them an excuse for asking more than formerly for their wares. During a short tour of investigation made through a farming district near Achern, Baden, I learned some rather interesting facts regarding the agricultural situation. The season has been very favorable for hay, and the farmers were cutting their second crop, consisting of fine, soft meadow grass and clover. For the privilege of cutting the first crop the owner receives this year \$18.50 per acre, and for the second crop \$9.90. Thus each acre yields a profit of \$28.40.

The grass is cut with scythes and raked by hand. Hay sells for \$19.05 to \$23.80 per ton for the best grades and from \$11.90 to \$14.16 for poorer grades. Meadow lands are thus valuable and have advanced in price, some selling as high as \$571.20 per acre. Just now these lands are especially in demand to supply feed for cattle, as the raising of domestic animals has been greatly stimulated in consequence of the exclusion of foreign meats. These lands are further rendered valuable by persistent fertilization and irrigation. Water is distributed by a system of trenches, which are flooded Saturday evening, when the mills along the small rivers cease work. Monday morning at 6 o'clock when work is resumed at the mills the water is turned off.

Cattle bring a high price, an ordinary cow selling for from \$71.40 to \$95.20, and finer grades from \$119 to \$166.60. In the community I visited cows are used on the farms almost invariably, instead of horses, for drawing wagons and plows. On the farms visited good spring chickens were selling for 83 to 95 cents each, ducks for 95 cents to \$1.66, geese for 18 to 25 cents per pound, and turkeys about 25 cents per pound. Eggs sell for 1.9 to 2.85 cents each, according to season. I was shown pigs five weeks old which were sold for \$8.57 each and hogs of moderate size for which the owner asked \$59.50. Milk sells for 4.28 to 9.52 cents per liter (1.0567 quarts) and vegetables and fruit of all sorts bring good prices.

I found that farm labor has not advanced in proportion to farm products. The laborers employed in harvesting are chiefly women, who are usually hired by the year. An able-bodied experienced woman receives as her year's wages \$59.50 to \$71.40 and her board and lodging. Girls 15 to 16 years old get \$14.28 to \$21.42, with board and lodging; also plain clothing. These women are expected to do ordinary farm work in all seasons. Many of the Baden farmers are wealthy, yet they live without luxuries, and many of them without what an American farmer would call necessities.

IMPORTS FROM ABROAD.

A report from Consul-General Richard Guenther, of Frankfort, states that the prices for all kinds of meat still keep advancing in Germany, compelling more butchers to give up their business, as the reduced patronage and profit does not afford a living.

The executive committee of the German Butchers' Union has presented a memorial to the chancellor of the German Empire, in which the following demands, which will please the hearts of the German agrarians, are made:

That the Imperial Government allow the importation of cattle from Denmark and Holland, and of swine from France and Denmark; that in view of the conditions exposed at Chicago, all importers of lard and margarine be required to declare the origin and the contents of the articles; that the importation of meat packed in casks be prohibited, and that no foreign canned meat be used for the army and navy nor on seagoing vessels.

During the first half of the present year the total value of the imports of cattle into Germany amounted to \$14,627,357 and of hogs to \$1,324,286. The value of imported fresh meat was \$5,040,000, of prepared meat \$3,865,714, and of lard \$11,233,571; the value of the imports of live animals and of meat and lard during the first half of 1906 amounted, therefore, to more than \$36,000,000. Compared with the corresponding period of 1905 this is an increase of about \$7,400,000, in which meat figured with nearly \$4,000,000 and lard with about \$2,000,000. The imports of lard came almost exclusively from the United States.

SUPPLY OF PARIS.

CONSTANT OFFICIAL INSPECTION—THRIFTY FRENCH FARMERS.

Consul-General Frank H. Mason reports that prior to the year 1810 the butchers of Paris slaughtered animals in the streets and public squares, but at that time municipal slaughterhouses—"abattoirs"—were established where animals intended for human food are inspected

and the whole process of slaughtering and disposal of the meat and offal are kept under official surveillance.

There are in Paris three principal abattoirs, the largest of which, "La Vilette," is in the northern quarter of the city; "Vaugirard," which was opened in 1898 and replaced the old slaughterhouse of Grenelle; and "Villejuif," where horses are slain for food. Any butcher may slaughter animals at these abattoirs on payment of a tax of 2 francs (40 cents) per 100 kilograms (220 pounds) on the meat so prepared. Butchers of the more important class and specially licensed are permitted to sell the meat which they have thus provided directly to the smaller dealers who keep retail meat stores throughout the city. Inspectors are in constant attendance and any meat found infected with disease, or otherwise unfit for food is saturated with petroleum and condemned.

Living animals which are found to be contaminated are required to be sold for a nominal price to the "knacker," and this regulation is so effective that of the 250,000 head of cattle slaughtered annually in Paris an average of 30 only per month are condemned. The abattoirs are open to the public from 10 to 7 o'clock, and invalids are frequently sent there by their physicians to drink the warm blood of the oxen, which is thought by some authorities to have a curative effect.

WORK AT ABATTOIRS—HIDES GO TO AMERICA.

The slaughterhouse of "La Vilette" is located on the Rue de Flandres, in the extreme northeastern section of the city, and is divided by the canal St. Martin from a large and well managed public market or stock yard, where cattle, sheep, and swine are sold. The abattoir itself includes space for 2,950 cattle, 9,700 sheep, and 1,500 calves. The most important killing days are Tuesdays and Fridays, which precede the principal market days of Paris. The record shows that the average daily work during the autumn and winter months is to slaughter and prepare for market 1,200 cattle, 800 sheep, and 500 calves. The record of an average year is 250,000 cattle, 205,000 calves, 1,676,000 sheep and goats, and 230,000 hogs, and the product of the last year was 126,000 metric tons of beef, veal, and mutton, and 16,000 of pork.

The hides are sold at a special market, the Halle aux Cuirs (which was lately destroyed by fire and is to be rebuilt), and a considerable percentage of them are bought for export to the United States.

"Vaugirard," the second in importance of Paris abattoirs, employs 50 butchers and during an average year slaughters 30,000 cattle, 36,000 calves, and 200,000 sheep, which yielded 15,112 tons of meat. The third and smallest of the abattoirs, "Villejuif," provides meat for the board of public charities, and slaughtered during an average year 15,000 oxen, 9,000 calves, and 65,000 sheep. Both Vaugirard and Villejuif have departments for slaughtering horses, donkeys, and mules, and the total number of such animals disposed of during a recent year was 18,000 horses, 250 donkeys, and 50 mules, which yielded 4,417 tons of meat. Butchers and meat dealers who sell horse meat are required to have a special sign, a horse's head, over their places of business, and it may not be sold at a store not thus designated.

TOTAL AMOUNT OF SLAUGHTERINGS.

The last year for which complete statistics concerning the meat supply of Paris have been published is 1903. From the reports of that

year it appears that 267,027 cattle, 274,390 calves, and 2,047,770 sheep were slaughtered at the city abattoirs and produced 156,007,850 kilograms (or 327,616,485 pounds) of meat, of which 123,712,180 kilograms (259,795,578 pounds) were consumed in Paris, and 32,292,650 kilograms exported. Some of the choicest of French beef goes to England, where the fillets and other prime cuts are in demand for clubs, hotels, and the best class of restaurants. During the same year there were killed 282,508 hogs, which yielded 27,657,350 kilograms (58,080,435 pounds) of pork, and 29,370 horses, which furnished 7,305,650 kilograms (or 15,341,865 pounds) of meat, all of which was consumed in Paris.

A striking feature of all these statistics is the very large percentage of calves slaughtered and veal consumed in Paris in proportion to other meats. This is mainly a result of the careful thrift of the French peasant, who makes it a point to generally have on his premises one or more calves which are fed on skimmed milk (which is not allowed to be sold in cities), combined with other food materials produced at home, so that the selling price of the fatted calf is, to a large extent, clear profit. The carefully enforced inspection system, which subjects every animal intended for slaughter to examination, prevents the killing of immature calves, and the veal of Paris and other French cities is uniformly of excellent quality.

The average meat yield of oxen killed in Paris in 1903 was 697 pounds, which was sold wholesale to dealers at the "halles centrales" for an average price of 12 cents per pound. Calves yielded 155 pounds per head of veal, which was sold for about 16 cents per pound. Sheep yielded an average of 46 pounds of mutton, which sold for 17 cents per pound. Hogs, 172 pounds each of pork, the wholesale price of which was 12½ cents per pound.

ORIGIN OF MEAT-PRODUCING ANIMALS.

As a rule the butcher's meat slaughtered and sold in this country is nearly all home grown. The native races of cattle, viz, the "Limousin" from the central departments, the "Normandy" from the northwest, and the "Nivernais" from the department of Nièvre, are unsurpassed as producers of beef of the highest quality. The whole imported stock for slaughtering purposes during 1904 was only 14,409 head, of which 11,030 came from Algeria, 2,869 from Italy, and 510 from all other countries.

With sheep the case is quite different. Land and grass are too valuable, except in certain limited districts, to be given over to sheep grazing, so that the mutton supply is largely of foreign origin. The record of 1904 shows that there were imported 1,169,635 head of sheep, of which 1,078,225 came from Algeria, 30,000 from Tunis, 16,327 from Montenegro, 3,255 from Spain, 2,200 from England, and 19,300 from Russia. The pork supply is almost exclusively home grown, only 3,000 hogs having been imported to the whole of France during the year, whereas 73,000 head were exported alive to Switzerland.

The intelligent, careful thrift of the French farmer, the rational system of inspection of animals and meats before and after slaughtering, the cleanliness and orderly management enforced at the abattoirs and the "halles" where the meats are sold, combine to render the meat supply of Paris regular, abundant, and equal perhaps in quality to that of any city in the world.

BRAZILIAN TRADE.**SCARCITY OF SUPPLY, YET TARIFF RESTRICTS IMPORTATION.**

Consul-General George E. Anderson, of Rio Janeiro, reports an opportunity to establish the meat-packing industry in Brazil. He writes:

There is little encouragement for trade in American meats and meat products in Brazil, but there is abundant encouragement for the establishment of meat-packing industries in this country under American auspices and with American machinery and methods. Tariff and other conditions make the importation of preserved meats an impossibility, while the Brazilian people are demanding better meat products from native sources. The country has unlimited grazing lands, the climate is favorable to stock raising, and corn grows readily.

In the Brazilian cities animals are generally slaughtered in municipal establishments, those in Rio Janeiro being leased to two contractors, and about 400 beeves are slaughtered daily. At present an Illinois company is endeavoring to secure a concession from the municipal government for the erection of modern abattoirs, in which all meat for the city would be prepared. It has been found difficult to make lard in this country, and as a result the fat is taken from the hog in a great roll and preserved by salting. This fat is rendered as needed by the natives, and is one of the standard articles of commerce.

SMALL PACKING HOUSES—HIGH TARIFF RATES.

There have been some attempts to establish meat-packing establishments, and in the State of Rio Grande do Sul there are a number of small plants doing all the business possible considering their equipment, but their methods are not up to date, much waste being evident. A meat-packing concern established in the State of Minas Geraes some time ago has ceased to operate on account of the high taxes.

At present almost all the preserved meats sold on the Brazilian market are imported. The American meat trade here, however, shows a steady decline for several years. The trouble seems to be altogether in price and tariff restrictions. The duty on fresh beef, mutton, or pork is 2 cents per pound, on game 10 cents, on dried meats $3\frac{1}{2}$ cents, and in brine 6 cents. On hams, sausage, tongues, soups, meat jellies, and other such goods the duty varies from 22 cents to 24 cents per pound. On certain fine Italian, Spanish, and Portuguese sausages the duty is 40 cents per pound, and upon meat extract \$1.15 per pound. In spite of these high duties there has been considerable movement of meat products to Brazil, demonstrating the strong demand for them among both the native and foreign population.

EXTENT OF FOREIGN PURCHASES.

In the ports north of Rio and including the capital cities there has been so strong a demand for meat that the local fresh supply has not been sufficient, and in 1904 there were imported 51,466 tons of jerked beef, valued at \$6,275,637. The imports of bacon were 1,319,485 pounds, worth \$163,626. The United States, during the last year for which figures are to be had, supplied twelve-thirteenths of this trade. The imports of ham in 1904 were 696,618 pounds, valued at \$167,121, an increase of about 9 per cent over the year before. Great Britain

has about four-fifths of this trade, but is losing a little in proportion to other countries. There is no question but there has been a very considerable shipment of American hams into Brazil under British marks, but I doubt if this is as large as has generally been asserted. The imports of preserved meats and extracts were 737,336 pounds, valued at \$171,578, of which the United States furnished only one-sixth; Portugal supplied three-fifths. Of lard the American shipments into Brazil, which four years ago exceeded \$1,000,000, in 1904 amounted to but \$306,132. Food products coming into Brazil must pass official analysis and careful inspection; each lot of every shipment is subject to analysis, for which the government makes a charge of 20 milreis (at the present rate of exchange equalling \$6.65 gold).

PACKING PLANT WANTED.

OPPORTUNITY TO SECURE A MARKET IN MADEIRA.

Consul M. Blake, of Funchal, thinks his district offers a good chance to an enterprising meat-packing firm. He writes:

The peculiar location of Madeira offers an exceptional opportunity for the establishment of a modern packing plant. The operation of such a concern, though not possible of unlimited development, from the comparative restrictions of local supply, would, nevertheless, surely prove upon investigation sufficiently attractive to justify investment. Aside from a consuming population drawn from the 50,000 prosperous inhabitants of Funchal alone, there is in addition to this a ready home market of ships in transit (mostly with passengers) amounting annually to upward of 1,200. With the low freight rates resulting from this healthy competition the markets of Europe are also put in proximate accessibility.

There are on the island about 150,000 head of cattle, of which number two-thirds are for breeding purposes. This would conservatively mean an available local supply of at least 20,000 head per annum for slaughtering purposes. Cattle from Portugal are admitted duty free while from all other countries there is a tax of \$2.50 per head under three years old and \$7.50 over that age. Sucking calves, in all cases, enter free by the side of the mother. From this it will be seen that importation is not prohibitive. Hog meat is in great favor among the natives as well as among the thousands of tourists that fill to overflowing the winter hotels. What is used here is all imported from England, paying excessive duties, and retailing in Funchal at about 45 cents per pound. A small quantity of sausage is made by the rustics, but it is of an unsavory kind and consequently without much of a market, while the curing of hams and bacon is absolutely not attempted.

The sheep of the island are of medium quality, there being no incentive to improve, the breed has been allowed to degenerate. Ducks, turkeys, chickens, and especially pigeons, could be exported in sufficient quantities to form a lucrative adjunct to this kindred industry.

DAIRY PRODUCTS.

MARKETS FOR CHEESE.

CAN THE AMERICAN PRODUCT BE SOLD IN SPAIN?

Consul-General B. H. Ridgely, of Barcelona, takes up the subject of a possible new market for American cheese, opened under the terms of the new commercial treaty with Spain, by which the lowest scale of Spain's tariff is applied to merchandise from the United States. Mr. Ridgely writes:

The following table shows the total imports, quantities, and values of cheese imported into Spain during the past three years:

Years.	Quantity.	Value.
	<i>Tons.</i>	
1903	1,829	\$831,640
1904	1,967	894,465
1905 ^a	1,769	804,220

^aSpanish statistics are not very reliable, and these figures are probably considerably below the real figures.

The principal consumption in Spain consists of the common round Dutch cheeses. These are sold here wholesale at 1.50 pesetas (27 cents) and 2 pesetas (36 cents) per kilogram (2½ pounds) delivered at the grocer's. Every Thursday evening a carload of about 500 cases, weighing 30 kilograms each or more, of these Dutch cheeses leaves Amsterdam and reaches Barcelona the following Thursday in time to be delivered to the trade on Friday morning. Barcelona, with the entire Provinces of Catalonia and Valencia as far as Alcoy, takes 650 tons of Dutch cheeses annually. Carthagená and Alicante are also markets for these cheeses owing to the large number of miners in the surrounding district with whom a piece of cheese and bread form part of the daily meal. Dutch cheese is retailed at 1.25 pesetas (23 cents) per pound of 12 ounces. Next in importance comes the Gruyère variety ranging in price (wholesale) from 2 pesetas (36 cents) to 2.75 pesetas (50 cents) and even 3 pesetas (55 cents) per kilogram. The best qualities are imported from Switzerland, but an imitation Gruyère of inferior quality is imported from France at the cheapest price.

Barcelona consumes about 60 tons of Gruyère in a year and Madrid about double that quantity. It is retailed at 1.75 pesetas (32 cents) per pound of 12 ounces. There are, of course, very many other kinds of cheese sold, such as Roquefort, Brie, Pommé, Cheshire, Stilton, etc., and there is hardly a variety which during the cool season can not be bought in Barcelona. Asked whether American cheeses were imported, the largest dealer here replied that none have been imported direct, but they come here from England and are sold as Cheshire, but there is little demand for this sort. If any American cheese manufacturer would like to try the Spanish market it might be worth his while to communicate with certain Barcelona firms [addresses on file at Bureau of Manufactures]. One of these firms, which wholesales exclusively, is particularly energetic and is already handling some American goods advantageously. Another is a large retailing firm of

grocers and importers of all sorts of fancy products, particularly of French, Dutch, and Swiss cheeses.

In addition to the customs duty of 25 centimos per kilogram (about 2 cents per pound) cheese pays at Barcelona an octroi tax of 12½ centimos per kilogram, or about 1 cent per pound. Thus intending American exporters would have to take into consideration customs duties and taxes, equal all told to about 3 cents per pound, and freight charges to Mediterranean ports of about \$7 per ton, roughly speaking.

The nominal cost of transporting cheese by either of the two steamship lines having regular monthly sailings from New York to Barcelona and other ports of the Spanish Mediterranean littoral would be from \$6 to \$8 per ton, but more exact information on this subject could be obtained from Manuel Caragol, agent of the *Compañia Transatlantica de Barcelona*, 82 Beaver street, New York, or from Ceballos & Co., 27 William street, New York.

My opinion is that if a fairly good quality of American creamery cheese can be delivered here in fresh condition, and if it can be sold cheaper than the Holland and Swiss cheese above referred to, there is every reason to believe that a considerable market can be developed in Spain.

CANADA.

SHIPMENT BY COLD STORAGE SYSTEM.

Consul-General J. G. Foster, of Ottawa, writes that 'the careful inspection of dairy products, to maintain standards, and the greatly improved facilities for cold-storage shipments have been largely instrumental in building up the dairy business in Canada. During the season of 1905, 41 cold-storage and cooled-air steamers sailed from Montreal for British ports, having a combined cold-storage space of 850,454 cubic feet and 573,671 cubic feet of cooled air. These steamers average five trips each during the season. A regular service of iced refrigerator cars for the carriage of butter only, from May 8 to October 21, was established on 58 different routes to Montreal. The Dominion department of agriculture guaranteed two-thirds of the earnings of a minimum car (20,000 pounds), plus \$4 for icing. When the earnings exceeded the guarantee there was no charge to the department.

CONTROL OF MILK SUPPLIES.

The Edinburgh Scotsman, an old and responsible newspaper, refers to the fact that at the recent medical congress held at Toronto, an interesting and suggestive paper on the control of milk supplies was read by Professor Harcourt, of a Canadian agricultural college. The Scotsman says: "He had great fault to find with the manner in which milk was kept and handled in Canada, and he added the remarkable statement that if a commission were appointed in that country to investigate the conditions under which milk was handled and delivered to the consumer, the report of the commission would be worse than the recent revelations relating to the meat-packing establishments in Chicago." The Scotsman says that if the general handling of milk in Canada is so unsatisfactory, it will hardly be contended that Canadian cheese is entirely beyond suspicion, and it asks the British authorities to exercise increased vigilance in testing and checking the purity and quality of imported dairy products. The Canadians probably will not relish this suggestion, but it is founded on home statements by its own representative men.

FRUIT TRADE.

OFFICIAL GOVERNMENT INSPECTION.

SOUTH AFRICAN PLAN TO IMPROVE SALES CONDITIONS AND RETURNS.

Vice-Consul-General C. M. Knight, in a report from Cape Town, gives details of a scheme for government assistance to the exporters of fruit from South Africa, which should be of interest to the fruit trade in America. The consul says:

The Fruit Exporters' Association has been urging the government to assist the fruit growers of the colony in exporting their fruit to the English market. It is learned from the office of the Director of Agriculture that a portion of the scheme will be adopted and carried out during the next fruit season. Expert fruit packers will be engaged at government expense to instruct the growers in the best methods of packing fruit for the London market. A government inspector will be appointed to inspect packages of fruit at the docks and a government stamp will be placed on all packages passed by this inspector, which it is expected will be a guaranty of the quality of the fruit and consequently raise its market value. It was proposed by the promoters of the scheme that all fruit not passed by the government inspector should be sold on the local market. This, however, has not been decided upon.

Further features of the scheme, as detailed in the local press and thought by the director of agriculture to come into force later if satisfactory arrangements can be made in London, are as follows: A Cape fruit agent would be appointed in London who must be familiar with the interests of the Cape fruit growers, but not interested in anyway in the London fruit trade. Such agent would act under the direction of the commercial agent or the agent general of the Cape Colony, and be advised by cable of shipments leaving here consigned to him. He would arrange for the distribution of the shipment among wholesale fruit dealers to be sold on commission, superintend such distribution immediately upon arrival of the shipment, and, as far as possible, assist in the unpacking of the fruit. He would also look after accounts and thus enable the department of agriculture here to pay the exporter for his fruit.

It is also proposed to arrange that the exporter would, upon delivering his fruit properly packed to a Cape government railway station master and paying carriage to the docks, get a receipt, which would relieve him of all further responsibility and anxiety. The entire expense of the scheme to the government if adopted in full it is thought would not exceed £350 (\$1,703.28) per annum.

It is thought by the promoters that the advantages to the exporters by this complete scheme would be very great, and that they will get much better prices for their fruit in London, and that a large number who have not yet opened connections with agents in London will, in consequence of the great facilities afforded by this scheme, join in, and considerably increase the fruit export trade.

GREEK CURRANTS.

ORGANIZATION TO LIMIT EXPORTS—THE TRADE OF PATRAS.

Consul J. V. Long, of Patras, reports that the placing of the Greek currant traffic under the direction and control of an organization termed "The Privilege Company for the Protection of Currant Production and Trade," which began operation in August, 1905, seems to be destined to produce a marked change for the better in trade conditions of that consular district.

For several years past the currant traffic labored under severe and trying conditions, due in the main to overproduction and the withdrawal of importation of the fruit into France. The situation apparently demanded a curtailment of production, but as there was a general unwillingness among the growers to lessen their crops, the idea of controlling overproduction by legislation was suggested and which was to limit exports to actual requirements of foreign markets. The company has accomplished commendable work thus far in bringing about an improvement in the schedule and range of prices. If it succeeds in carrying out one of its principal objects, that of increasing consumption abroad by extensive advertising, its usefulness to the growers will be established.

Another important item of commercial importance in this district is the production of olive oil. The total output for the entire Kingdom in 1905 amounted to 147,503,105 pounds, of which 113,965,515 pounds were produced in the Patras consular district.

TASMANIAN APPLE ORCHARDS.

PROFITABLE EXPORTS STIMULATES HORTICULTURE.

The export of apples from Tasmania to Great Britain was 298,000 cases in the fiscal year 1903, 574,000 in 1904, 366,644 in 1905, and 261,664 in 1906. This last season's decrease was due to an unprecedented crop failure, and the shipments were valued at \$1.46 to \$1.70 per case (cubical contents = 2,237 inches) on the Hobart wharf.

D. H. Ross, a Canadian commercial agent, states that the probable exports of Tasmanian apples to Great Britain for the 1907 season will be from 600,000 to 750,000 cases. They go in cold storage at a temperature of 32° to 40°, and a freight rate of 66 cents per case was charged on the 1906 crop for the 11,000 miles covered. Had the shipments been larger the rates would likely have been slightly lower. By a cooperative plan the fruit is sent in gradual consignments in order to yield the highest prices. Apple orchards in full bearing in Tasmania are valued at \$485 to \$730 per acre, as much as \$1,192 per acre having been paid for orchards 20 miles from Hobart. With fair crops, as in 1905, the average return is 400 bushels per acre, though 800 to 1,300 bushels have been produced. A fair return is figured at 48 to 54 cents per bushel on the trees. It is feared that the rapidly increasing orchards will shortly produce a big surplus above the natural demand.

ORANGES AND LEMONS.

SICILY'S FOREIGN SHIPMENTS GREATLY INCREASE.

Vice-Consul Jacob Ritter furnishes from Catania the returns of oranges and lemons going through that port of Sicily, as follows:

The total number of boxes shipped for the year ending September 1 was 2,886,269, against 2,697,784 boxes the previous year. Lemons comprised one-third of the fruit. To the Italian mainland last year the citrus-fruit shipments were 584,120 boxes; Austria-Hungary took 1,346,130; France, 22,075; Germany, 327,745; Great Britain, 31,071; Norway, 7,791; Sweden, 2,575; Holland, 2,371; Roumania, 50,053; Russia, 273,493; New York, 17,187; Turkey, 171,561; Switzerland, 31,307. Owing to special freight rates on Italian railway lines the export of Sicily oranges and lemons to Italian and continental countries greatly increased last season.

IRISH MARKETS.

SALES OPENING FOR SUPERIOR ARTICLES.

Consul A. K. Moe, of Dublin, reports that Ireland, once a great fruit-producing country, is in a fair way, if carefully worked, of becoming a good buyer of fruit, but it must be good fruit. He writes:

The old complaint is being revived concerning the stagnant condition of fruit culture in Ireland, and, as usual, various causes are given for the decline, the chief ones being the want of a market, excessive freight rates on Irish railways, and foreign competition. That there is a market in Ireland for fruit is undeniable, but it must be a market in the first instance with popular approval—in other words, the produce must be inviting to the public taste, and it must be sold at a price within the means of the community, and in the special case of Ireland the public must be invited and taught to appreciate fruit and its value from a hygienic point.

NUTS.

WALNUTS IN FRANCE.

GROWING CROP DAMAGED BY DROUGHT.

Vice-Consul T. W. Murton, of Grenoble, reports that the walnut crop of the Isère Valley this year will not exceed the average, while it is feared the nuts will suffer in quality because of prolonged drought. In July last indications were promising for a large crop, and Vice-Consul Murton so reported. Writing, September 30, he says:

Since my last report conditions in the growing crop of walnuts in the Isère Valley have changed. The cause of this change is the prolonged drought and excessive heat, unusual for the season, that has prevailed in these parts for more than six weeks, no rain having fallen from the 27th of July till the 10th of September, when a little rain fell during one day, too late and not sufficient in quantity to do much good. The consequence has been that all standing crops in general have suffered greatly, and as regards walnuts the immediate effect has

been to retard the normal development of the fruit, which this year will be smaller than usual and probably wormy. The shells, however, appear to be fairly well filled, though in some cases the kernels are shrunken. On the whole, it is estimated at present that about 35,000 bales of 100 kilos of Mayettes will be available for export, and 40,000 cases of Chabert halves of 25 kilograms each. (One kilogram equals 2.2046 pounds.)

I am informed that many contracts have already been made for future delivery at prices varying from 90 to 110 francs per 100 kilos for Mayettes (first quality walnuts), and from 190 to 230 francs for Chabert halves. First shipments, it is presumed, will go forward to the United States about October 20.

This district has been remarkably free from thunder and hail storms this year, which often do considerable damage to the standing crops, but the long drought has perhaps done more harm.

PEANUTS IN SPAIN.

VARIETIES, PRICES, AND OUTPUT.

Vice-Consul Maddin Summers, of Madrid, reports that this year's Spanish peanut crop promises to be much better than that of last year, both in quantity and quality.

The only province in Spain where peanuts are produced is Valencia. There are two different sorts, one containing two nuts—probably known in America as Spanish peanuts—and the other containing three or four nuts, known in England as "giants." The first class is by far the most common and cheapest.

There are two varieties of each class, the white and the red. The quality of the grain is the same in both and they are distinguished by the color of the skin. In some places first class is preferred, in others the second.

The price fluctuates between 18 and 24 pesetas per sack of 50 kilos (the peseta is now worth about 17½ cents) f. o. b. Valencia for the class containing two grains and from 23 to 30 pesetas for the class containing three or four. The shelled peanut, which is exported largely to the United States, is sold at about 60 pesetas per sack of 100 kilos. The prices vary according to the market, but, generally speaking, are as indicated. These nuts are usually sold f. o. b. Valencia and the weights thereof are verified by the public weigher, thus relieving the shipper of any responsibility as to loss of weight which might occur on the voyage. Sight drafts in pounds sterling with bill of lading attached are usually drawn for the amount of the invoice.

OLIVE OIL.

QUALITY OF PRODUCT IMPORTED.

Replying to a circular in regard to alleged misbranding of olive oil invoiced at Florence, Italy, Vice-Consul Bernardi reports that after personal investigation he is warranted in stating there has not been any misbranding of olive oil exported from that district to the United States during the past thirty years. The vice-consul writes:

The twelve olive-oil exporters of Florence (whose names are furnished) are too proud of their product, which has the highest reputa-

tion for excellence and purity, to do anything with the oil or its preparation for market that would interfere with its established reputation. Olive oil shipped from this consulate retains the taste of the fruit, is of medium density, and has a yellow-greenish color, different from the color of lower grade olive oils used mainly for kitchen and not for table purposes.

In reply to an inquiry, Dr. H. W. Wiley, Chief of the Bureau of Chemistry, Department of Agriculture, states:

During the last two years we have found that the olive oil imported was practically all pure. The fact that other oils are sold as olive oil under foreign labels in this country has caused considerable misapprehension on that subject. We have found that labels are imported from France and Italy and attached to packages of oil partly or entirely manufactured in the United States, and in some instances foreign packages are imitated in the United States. We believe, however, that all of the oil imported into the United States as olive oil is pure.

CANNED CORN.

NO DEMAND IN GERMANY.

In response to inquiries as to the advisability of introducing canned corn into Germany, Consul Thomas R. Wallace, of Crefeld, writes:

In this part of the country there is no demand for canned corn. As a rule, the people seem to be ignorant of the product. It is not offered for sale at the stores, although the merchants will send for it upon receiving an order. There are a number of people who have lived in America who would purchase the product if it was displayed for sale, and it seems that if an effort were made to introduce it a trade could eventually be built up. My family has made efforts to create a demand for canned corn by always providing it for our German guests and also by distributing a few cans among our German friends and neighbors. All who have tried the corn like it, and it appears to me that a demand could be created for this product if the people were made acquainted with its good qualities, accompanied with instructions in German how to prepare it for the table.

TEA.

TEA TRADE.

DECLINE IN CHINA'S OUTPUT AND REMEDY.

Vice-Consul J. H. Arnold sends from Foochow a comprehensive report on the decline of the Chinese tea trade, with some suggestive remedies. His statistics are carefully prepared and embrace comparative tables, showing in diagram the varying exportations of tea from producing countries, by years, and by variety, all of which are on file for reference by those interested at the Bureau of Manufactures. A summary of Mr. Arnold's report follows:

China held the tea trade of the world from 1678, when tea was first introduced into England in a small way, until 1837, when tea from

India appeared as a rival. The total exports of tea from China reached their highest point, 300,000,000 pounds, in 1886. From that time to the present a gradual decline is to be noted. In 1884 the tea consumption of the nontea-producing countries of the world was 372,000,000 pounds. Of this amount China furnished about 72 per cent, India and Ceylon 18 per cent, and Japan and Formosa about 10 per cent. During the succeeding 20 years the world's consumption almost doubled. Of the 644,000,000 pounds consumed in 1904, however, India and Ceylon contributed 60 per cent, China 30 per cent, and Japan and Formosa 10 per cent.

The important British market which in 1860 took 78,000,000 pounds of Chinese tea began at that time to use the India and Ceylon product appreciably. In 1905 the British tea consumption was 260,000,000 pounds, or 6 pounds per capita, of which China supplied only 2½ per cent, the enormous India and Ceylon increase having practically driven Chinese teas out of the market. The same is true in Australasia, where the per capita consumption has now reached the high mark of 8 pounds per annum. In 1895 Australasian tea purchases were 36,000,000 pounds, China supplying less than 2 per cent.

China's tea trade with Russia is the only phase that has shown a steady, healthful growth. In 1899 Russia took 132,000,000 pounds of China tea, or over one-half of the total exported. Even there the India and Ceylon tea merchants are trying to obtain a strong foothold. The Russian peasant wants a cheap tea, and if India's exporters can reach this class they will establish themselves in the Russian market.

THE AMERICAN MARKET.

The per capita tea consumption of the United States in 1905 was about the same as fifty years ago, 1.3 pounds per annum; the increased population accounting for the increased imports, which last year amounted to 103,000,000 pounds. Up to 1865 China supplied all of the tea consumption in the American market, but last year only 40.3 per cent, while Japan furnished 32 per cent, Formosa 17.2 per cent, and India and Ceylon 10½ per cent. The latter made its entry into the American markets in 1885 with sales of 2 per cent of the total imports. Practically all of Japan's teas go to America. The Japanese charge of only \$1 per picul (133 pounds) on exported tea has been advantageous to this trade. The India and Ceylon teas are still freer from burdens, paying no export or discriminating taxes of any kind. It may be noted that India and Ceylon teas are also competing very strongly with the Japan teas in the Canadian market, and it will be interesting to note the results of this competition.

The Formosan tea trade with America shows a steadier and more healthful growth than that of any other country. The Formosan Oolongs have entirely replaced the Amoy Oolongs, which they have supplanted. Chinese teas are still popular in the United States, deservedly so because of the small amount of tannin in the leaves. A number of analyses by Professor Ditmar shows that a five-minute infusion of Chinese tea developed only 3.06 per cent tannin and with ten minutes' infusion 3.78 per cent, while the India tea developed 6.77 and 8.09 per cent tannin, respectively. Having the quality, it therefore behooves the Chinese tea producers, exporters, tea guilds, and Government to awaken to the competition and do their utmost to save the American market, which the India tea trade is already striving hard to secure.

COFFEE VERSUS TEA—AGRICULTURAL SCHOOLS.

That the American tea market is capable of great development is not to be questioned. The American taste has been toward coffee, the consumption of coffee having increased from 2.8 pounds per capita in 1830 to 11.8 pounds in 1899. Coffee drinking is more expensive than tea and proper methods of advertising China tea in America would bring profitable results. An American-China association might be organized, this association to embrace the exporters and importers of China teas, the Chinese buyers, and the China tea guilds, in order that the expenses of an advertising campaign might be shared by all those to be benefited.

The Imperial maritime Chinese customs has repeatedly criticised the careless native methods as to the growing and preparation of the leaf. It is contended that machine rolling is not adapted to the China leaf, but there is much that the country can do toward improving the methods. A visit to the once famous tea districts near Foochow shows that the tea plants are not cared for as they should be. They are not well pruned, and frequently the soil is overtaxed by the planting of potatoes and beans in the tea field. Cooperation on the part of buyers could do much to prevent illicit practices on the part of the packers and assist toward keeping up the standards. While there is so much progress in establishing modern schools in China there should be something done toward establishing agricultural schools, where the proper method of cultivating the two staples, tea and silk, could be taught.

INDIA.

HIGHER GRADES ARE VERY MUCH IN DEMAND.

Consul-General W. H. Michael, in reporting on the condition of India's tea trade, notes a very considerable falling off in the exports to Russia, a small decrease in the exports to the United States, and indicates the path along which India will have to go if it is to hold its tea trade. He writes:

The total exports of tea from India during the year ended April 26, 1906, amounted to 214,198,943 pounds, valued at \$29,294,936. The shipments to the United Kingdom were 166,604,000 pounds; Canada, 15,019,000 pounds; Russia, 9,991,000 pounds; Australia, 7,746 pounds; Turkey and Asia, 3,464,000 pounds; the United States, 2,185,000 pounds; Persia, 1,091,000 pounds, and to all other countries, 8,084,000 pounds. All these countries, except the United States and Persia, increased their purchases over 1905. The trade with the United States decreased 9.7 per cent and that with Persia 65.5 per cent.

There are 134 tea-planting companies registered in India. Of these 128 are in Bengal, and most of the others in Assam. The total acreage, in 1905-6, was 524,472 and the production 222,217,223 pounds. The total paid-up capital invested in the tea industry was \$11,293,477, and is increasing each year. India will have to improve, however, on the quality of tea in order to hold its best trade. The demand for higher grade teas is increasing throughout the United Kingdom, Canada, and the United States.

During the last two weeks of August, 1906, two public sales of tea were held in Calcutta, at which 39,243 packages were offered for sale.

They brought 11.3 cents per pound. The total exports of tea from Calcutta, Chittagong, and the South Indian ports, from April 1 to July 31, 1906, amounted to 40,740,024 pounds, against 31,186,627 pounds for the corresponding period of 1905.

BEVERAGES.

BEER POPULAR IN FRANCE.

Consul-General Frank H. Mason, of Paris, brings out the interesting facts revealed by the recent official statistics that the consumption of beer in France has increased by more than 40 per cent during the past five years, and reached, during the past year, the imposing total of 12,000,000 hectoliters, or 317,040,000 gallons. Mr. Mason continues:

This result can hardly surprise any one who has noted in Paris and other large cities of France the rapid development of the "brasserie," or café-restaurant, where beer is sold. Much of this beer is imported (or purports to be so) from Pilsen and Munich, though most of the leading breweries in other German cities have Paris agencies and distribute their beer to retailers. This entails high prices to consumers, as there is an import duty of from \$1.73 to \$2.31 per 100 kilograms (220 pounds), weight of cask included, on all foreign-brewed beer brought into the country, and under the stimulus of this protection the brewing industry of France has developed rapidly both in respect to quantity and quality of its product.

DECREASE IN CONSUMPTION OF ABSINTH.

It does not appear that the increased use of beer has diminished in the slightest degree the consumption of wine and cider, and the one encouraging feature of the situation is found in the fact that the consumption of alcohol, especially in the perilous form of absinth, is slowly but steadily decreasing. The statistics of 1904 show that during that year 177,439 hectoliters (4,687,938 gallons) of absinth were sold for drinking purposes in France, whereas 1905 showed a falling off to 172,503 hectoliters (4,557,529 gallons), or 2.8 per cent. This is not a sweeping or conclusive reform, as the absinth habit is still one of the gravest perils that threatens the manhood of France; but the statistics show that the maximum danger point has been passed, and the decline of even so small a percentage in absinth consumption is accepted as ground for encouragement and hope.

GREAT BRITAIN.

PER CAPITA CONSUMPTION SHOWS DECLINE.

There has been a decline of nearly 2,500,000 barrels of beer in the annual consumption of the United Kingdom during the past six years, notwithstanding that the population increased by 2,000,000.

Official figures for the fiscal year 1906 give the amount retained for consumption at 33,504,000 barrels, or 27.9 gallons per capita. The decline of 11 per cent has taken place entirely in the English and Scottish consumption, since that of Ireland exhibits a slight actual increase

over the six years previous. That the people of the United Kingdom are not making up for their beer frugality by imbibing more spirits is shown by the statistics, from which it appears that the total annual consumption of spirits decreased from 1.1 proof gallons to nine-tenths of a gallon. The spirits retained for consumption in the 1906 fiscal year was 34,487,000 gallons of homemade, and 6,735,000 foreign. Measured by the population, the decline in the amount of British spirits consumed is about 15 per cent, whereas in respect to foreign spirits it is about 29 per cent. Furthermore, the practice of private brewing has decreased enormously in the last decade. The sale of beer to the trade is being centered in the hands of the large producers. English journals draw as a deduction from these figures that the habits of their people are improving.

The British are evidently giving up alcoholic drinks more and more and becoming still greater tea drinkers, their imports of tea for home consumption having been for the first seven months of 1906, 155,767,710 pounds, an increase of over 10,000,000 pounds above the same period of 1905.

BEER BREWING IN MEXICO.

EXTENSIVE SALES OF HOME PRODUCT—AMERICAN CHANCES.

Consul W. W. Canada reports that Mexico's importation of beers by way of Veracruz has fallen off to a nominal figure. The reason is the establishment of numerous breweries in the Republic. To further the brewing interests the Government permits of the free entry of hops, and malt is admitted at an import duty of \$1.50 United States currency for each 220 pounds gross weight. Two grades of beer are put upon this market, export and draught beer. The coast trade is mainly in bottled export beer, the best brands of which may be purchased in this city at \$6.25 United States currency per case of five dozen pint bottles; the lighter table beer at \$4.50 United States currency. However, the dealer pays for the empty bottles, straw coverings, and empty case, upon their return to him, \$2 United States currency. This brings the price to within the means of many who formerly could not indulge in that beverage, owing to the high price of imported beers. Since the cheaper light beers have made their appearance in this market the consumption has increased enormously. In fact, there are times when the supply is not equal to the demand.

The retailer sells bottled export beer at from 13 to 15 cents United States currency per pint bottle, the cheaper grades at from 5 to 8 cents. English and German beers are sold at about double the price of the better grades of native brewing, and in this case the heavy black beers are preferred. Ales are rarely called for. If American beers could be sold in this market at prices to compete with the native product, no doubt exists but that a splendid trade could be secured, for American beers would have the preference over all others, notwithstanding the claims advanced by Mexican brewers. The import duty on beers in barrels is \$5 United States currency, for 220 pounds gross weight, and in bottles, \$12.50 United States currency, for 220 pounds, net weight. Names are given of parties who might take agencies for the American product. [List of all dealers in State of Veracruz obtainable from Bureau of Manufactures.]

AGRICULTURE.

SOME MODERN PHASES.

PANAMA.

GOOD OPENING FOR TRUCK AND POULTRY FARMS.

Upon information obtained from official statistics from Panamanian and American planters and from personal observations, Consul James C. Kellogg, of Colon, makes the following report on agriculture in Panama:

The Republic of Panama contains about 20,781,000 acres of land, of which about 76,450 acres are under cultivation. The cultivated lands are planted as follows: 1,147 acres in cacao, 1,177 acres in coffee, 37,000 acres in bananas, 13,630 acres in cocoanuts (which does not include the cocoanut palms growing wild on the San Blas coast), 1,185 acres in rubber (which does not include rubber trees in the district of Darien or those growing wild in the province of Veraguas), 1,095 acres in sugar cane, and about 14,600 acres in rice, corn, yams, sweet potatoes, and other vegetables, which is divided principally into small farms of 1 to 10 acres each. The number of these small farms is estimated at 2,000. Farms of less value than \$100 gold pay no taxes; those above such valuation pay taxes of 6 per cent to the Government.

The soil of Panama is very fertile, especially the first and second bottom lands, where almost anything will grow and mature. The uplands are also productive and especially adapted to coffee growing. In the lowlands and river valleys the temperature is 70° to 90° F. in the shade; in the mountainous districts it is cooler. During the latter eight months of the year there is a rainfall of from 2 to 22 inches per month, while on the Pacific side of the Isthmus and in the interior the rainfall is moderate.

PRODUCTS AND RESOURCES.

The country contains valuable hard woods, such as rosewood, maria, lignum-vitæ, cedar, mahogany, cocobolo, etc.; also dyewoods, resinous trees, medicinal and commercial plants, cereals, edible roots, and such vegetables as sweet potatoes, cabbage, yams, lettuce, beans, pumpkins, tomatoes, watermelons, cucumbers, and tropical fruits. The supply of vegetables raised on the Isthmus does not meet the demand; consequently much of this product is shipped in from Jamaica, New York, and New Orleans, and even then there is a great deficiency of this most necessary article of diet which can not be supplanted by the canned article. The prices charged for produce in the markets of Colon are higher than in any other place in the Republic.

Modern truck farms situated in the Canal Zone along the line of the Panama Railroad would undoubtedly become profitable invest-

ments and would contribute much toward solving the food problem on the Isthmus proper, which continues to be a difficult proposition. The staple products raised by the natives consist chiefly of yams, bananas, yuca, maize, rice, beans, plantains, and cocoanuts. Sugar cane grows well on the alluvial lands. To obtain the cane juice the cane is crushed by homemade wooden machines, although occasionally one sees a primitive iron mill in use. The cane juice is boiled and poured into small wooden molds. After hardening it is rolled up in leaves, whereupon it is ready for market. A little soft, dark sugar is sometimes made, and large quantities of rum are manufactured from the sugar cane.

PRIMITIVE FARMING.

The methods of planting, as practiced by the natives, are extremely crude. Modern agricultural implements and machinery are unknown; consequently one sees no plowing nor harrowing of the soil. In the province of Chiriqui, which is the banner agricultural province, conditions are better, but even there the farming methods are antiquated and without system. As this country awakens to its possibilities in the agricultural line there will be a fine opening for American farm implements and machinery.

The native method of starting a farm on virgin soil is by felling the trees and cutting the undergrowth, which is allowed to lay during the dry season and subsequently burned off. After this clearing-off process is finished holes are punched in the ground with a pointed stick, into which seed are dropped, nothing being done in the way of cultivation. Some of the more industrious planters loosen the soil for each plant separately about 6 inches in diameter by 12 inches deep, and into this hole the seeds are then laid or the young plants embedded, as the case may be. Very little attention is given to keeping the weeds down. When this is practiced, however, it is accomplished by using the machete, a very long knife, which the natives wield very dexterously. More frequently, however, it is a battle for life between the tame plants and the wild jungle. When corn is planted and the larger jungle plants are kept cut down and the corn gets the better of the small jungle plants, as much as 40 to 80 bushels to the acre are sometimes harvested. The native farmer seldom plants an entire acre in corn or any other one product, desiring only to raise enough produce for his own immediate use. Often a family of 9 or 10 adults will cultivate a farm of only 3 to 6 acres. The wants of the people are few and easily satisfied, and very little of their produce is brought to market, which depends chiefly upon the small Chinese truck gardens for vegetables and small coasting sailboats for wild fruits.

TROPICAL FORESTS—CLEARING LAND.

The products of the forest are procured with great difficulty, owing to the lack of roads through the almost impenetrable jungle, and most of the valuable woods and other forest products that lay adjacent to the navigable streams and rivers have already been exploited. Penetrating the forest is also dangerous, on account of the great number of wild beasts in the jungle and alligators and reptiles in the swamps. The jungle and swamps teem with countless varieties of fish and game, among the latter deer, wild hogs, turkeys, pigeons, partridges, woodcock, rabbits, tapirs, monkeys, pumas, leopards, and even tigers and lions.

Laborers are paid from 60 to 80 cents gold per day for clearing virgin lands and getting them ready for planting. The cost per acre of clearing virgin land is about \$50 gold. This excessive cost is owing chiefly to the slow method employed and the lack of and inability to use other implements than the machete. The prospective American planter who wishes to clear the land himself would do well to be provided with extra heavy stump-jumper disk plows and extra powerful stump pullers. With these implements the cost of clearing would be very much reduced, and especially so if the natives were instructed how to use such implements, for the cost of labor—60 to 80 cents gold per day—is very moderate.

PUBLIC LAND LEASED—POULTRY SUPPLIES.

The Panamanian Government does not sell public lands, but simply leases them in tracts; 1 to 10 acres can be leased yearly for 50 cents gold per acre; larger tracts of a thousand acres can be leased yearly for \$100 gold per tract. These prices refer only to virgin lands. Private lands for farming purposes are sold on a conventional basis, no fixed prices being put upon such lands. The above-mentioned leases can be obtained for at least ten years, with privilege of renewal. The Isthmian Canal Commission also leases farm lands for short periods at moderate prices. The draft animals used for farming and other purposes are small, but what they lack in size and strength is made up for by their hardiness and the small cost of maintaining them.

Domestic fowls, such as poultry and ducks, are not raised to any great extent, at least not in the district of Colon, where they are scarce and command exorbitant prices. Most of the live poultry is imported from Cartagena, Colombia, and from New Orleans, and, due to freight rates, municipal tax, and high profit percentages, the retail cost is from 90 cents to \$1.50 gold each, with the result that chickens, which form part of the daily food in other South American and West Indian countries, are rare bits in this district. Fresh laid eggs are obtainable in the interior of the Republic, but in the territory adjoining the Canal Zone, and especially in Colon, they are very scarce. They retail at from 3 to 5 cents gold each, and are chiefly cold storage eggs shipped in from New York and New Orleans.

SCHOOL OF AGRICULTURE—MACHINERY CONCESSION.

Last spring the Panamanian Government engaged the services of Dr. D. H. Lupi, a well-known Venezuelan agriculturist, who will establish a school of agriculture. This gentleman has just returned from a visit through the provinces, where he has studied the agricultural conditions and needs of the country, and is now drawing up a report of his investigations, which will soon be presented to the Government. The National Assembly, now in session, has just passed the second reading of a law which will permit the free introduction of machinery, stills, and apparatus for making sugar, molasses, and sirup, and for rectifying alcohol. I am informed by high official authority that the National Assembly will also revise and enact new laws which will tend to stimulate and arouse national interest in the development of the great agricultural resources of this fertile country, which have been lying dormant for so many years.

LIVE STOCK IN BRAZIL.

AMERICAN STOCK WANTED—SWINE DO WELL.

Consul G. E. Anderson, of Rio Janeiro, thinks that it is possible that something can be done by American live-stock breeders in the way of shipping fine live stock to Brazil. He writes:

The business would be limited in scope, at least at first, and it can only be attempted after correspondence and definite arrangements with responsible people. At several times in the past few years attempts have been made to build up a business of this sort, and on one or two occasions stock has been shipped and sold at auction with satisfactory results to shippers; but results have not been so satisfactory to purchasers, and it is very doubtful if this plan would succeed again. So far the attempts made to introduce North American cattle have not been successful. The range country of Brazil—mostly in Rio Grande do Sul—is of good quality and offers abundant support to the cattle accustomed to it, but the grass is too short for American-bred stock, and they do not thrive on it. Probably in the course of time stock of foreign breeding can be suited to Brazilian pastures, but at present the Brazilian stockmen seem to be afraid to make any extensive experiments in this line.

The case of swine is considerably different, and it is probable that something profitable can be built up in them. One of the prominent live-stock men of the country made an importation of American Berkshires a short time ago, and reports results as being very satisfactory. Hogs thrive in almost all parts of Brazil, and corn can be raised over a very large portion of its tillable territory. [American live-stock men prepared to make propositions for the sale and shipment of live stock can probably do best by writing to several parties named by Mr. Anderson, the addresses of whom can be secured from the Bureau of Manufactures.] It should be remembered that Brazil already has some very fine stock. There is certainly a disposition to look to high-grade stock when and where it is reasonably certain that such stock will be profitable.

AUSTRALIA.

NEW SOUTH WALES SHEEP RETURNS.

Consul F. W. Goding, of Newcastle, writes that returns of the autumn and winter lambing in New South Wales show that of the 19,220,000 ewes in the State on December 23 last, 12,779,000, or about 61 per cent, were used for the earlier lambing.

In those districts in which the lambing took place in the autumn, 10,393,000 ewes gave birth to 8,470,000 lambs, or a percentage of 81½, and of these it is expected that 7,784,750 will be marked. From the winter lambing 1,905,200 lambs resulted. The probable markings are set down at 1,759,250. It will be seen, therefore, that for the autumn and winter lambing no less than 12,779,000 ewes have been requisitioned. The lambs born numbered 10,376,000, or 81 per cent, and it is estimated that the probable markings will reach 9,544,000, or nearly 92 per cent of the total lambs born. According to the returns collected by the Government statistician, the sheep on December 31,

1905, numbered 39,506,764, and after making due allowance for local food requirements, export, and losses, it is reasonable to suppose that the sheep in this State at the close of the year will range from 45 to 46 millions.

CEREALS.

CEREAL MARKETS.

POSSIBLE SUPPRESSION OF DUTIES ON GRAIN BY MEXICO.

Referring to the damage done to Mexican crops by the late and excessive rains and floods, Consul-General A. L. M. Gottschalk, of Mexico City, in a dispatch dated October 6, reports that the general situation appears to be much improved, especially as to cereal crops and a possible scarcity of food-stuffs for the coming year. Mr. Gottschalk continues:

An official effort is being made to ascertain the extent which cereal crops have suffered throughout the Republic and tabulate the quantities of each cereal on hand. I am informed that if any danger presents itself of a scarcity of cereal products the Government will consider some temporary suppression or reduction of the duties on corn and other grains to continue until the proper balance has been reestablished. Nothing, however, can be done until the various sections of the Republic have been heard from, which will probably not be until the end of October or early in November.

There may here be a possible opportunity for exporters of American cereals (beans, corn, etc.) to find a favorable chance for placing shipments in the Republic. This office simply wishes to inform the American trade in one particular line that an unusually good opportunity for placing a certain kind of merchandise may exist here within a short period. It behooves the practiced exporter to take the usual commercial methods to enter the field. As soon as any official decision has been reached a further report will be made. It should be added, however, that American grain merchants need not hope, by addressing this office, to have consignments placed for them, a misconception which often follows the publication of a consular report such as the above.

FRANCE.

OFFICIAL ESTIMATES OF GRAIN CROP.

Consul A. Gaulin, of Havre, reports that the estimates of the grain crop of France for the season of 1905-6 have been published by the Minister of Agriculture and the Bulletin des Halles. The official figures are as follows: Wheat, 324,728,408 bushels, against 335,457,433 bushels for the preceding season; maslin, 6,935,820 bushels, against 7,149,071 bushels; rye, 51,095,245 bushels, against 58,117,142 bushels.

The different estimates of the Bulletin des Halles are grouped, for reference, in the table following.

	1906.	1905.	Average for ten years, 1896-1905.
	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>
Wheat.....	352,485,000	338,789,607	328,057,278
Maslin.....	11,068,000	6,387,843	15,113,342
Rye.....	49,659,500	60,267,675	58,601,620
Barley.....	41,147,230	42,873,713	42,535,805
Oats.....	244,045,000	282,246,160	263,297,102

The yearly consumption of wheat in France is estimated at 345,104,916 bushels. Taking the estimate published by the minister of agriculture, France would have to import during the coming year (as there are practically no reserve stocks) about 10,000,000 bushels of wheat, which could be almost entirely supplied, however, by Algeria and Tunis. In any case the country will need for mixing purposes at least 2,000,000 bushels of foreign hard wheat.

HOP INDUSTRY.

GROWTH AND CONSUMPTION—AMERICAN PRODUCT PREFERRED IN ENGLAND.

According to a report from Consul George E. Baldwin, of Nuremberg, printed in Daily Consular Reports for October 9, the outlook for the hop crop of England in 1906 was very unfavorable. Taken in connection with a report printed in Daily Reports for September 29, showing an estimated decrease in the world's hop crop of 1906, as compared with that of 1905, of nearly 95,000,000 pounds (the decrease according to Consul Baldwin is 92,532,000 pounds), this would seem to promise an enlarged foreign demand for the American product. In connection with this subject it is worth while to reproduce the returns given in Consul Baldwin's hop crop report just mentioned, viz:

Country of production.	Crop of 1905.	Estimated crop of 1906.
	<i>Pounds.</i>	<i>Pounds.</i>
Germany.....	70,510,000	45,870,000
Austria.....	45,716,000	20,504,000
England.....	70,400,000	33,000,000
United States.....	55,440,000	62,920,000
All other countries.....	32,560,000	19,800,000
Total.....	274,626,000	182,094,000

Outside the United States—the only country showing an increased output—the estimated hop crop of 1906 is only a little more than one-half the quantity produced in 1905.

EXPORTS OF AMERICAN HOPS.

According to the published returns of the Bureau of Statistics, the exports of American hops during the year ended June 30, 1906, amounted to 13,026,904 pounds, valued at \$3,125,800, of which 11,947,616 pounds, valued at \$2,938,902, went to the United Kingdom.

Deducting from the remaining exports 493,521 pounds, valued at \$81,733, exported to Australasia, 391,450 pounds, valued at \$70,376, sent to Canada, there remain for the rest of the world only 664,317 pounds, valued at \$34,811. It thus appears that the British market consumes nearly all the American hops exported.

Whether the continental countries have enough of stock hops to make up for the 1906 deficiencies or whether they will be forced to draw upon the United States to help them out remains to be seen; but that the British consumers will have to import American hops in greatly enlarged quantities seems to be an assured fact. It is therefore of special interest to note the countries from which the United Kingdom imported hops in 1905, the latest year for which complete statistics are at hand.

Imports of hops into the United Kingdom during the calendar year 1905.

Country.	Quantities.	Value.	Value per pound.
	<i>Pounds.</i>		
Belgium.....	4,385,136	\$669,630	\$0.1527
Germany.....	1,952,608	337,735	.1729
Netherlands.....	1,668,010	245,758	.1461
United States.....	3,967,824	926,121	.2334
All other countries.....	251,158	41,339	.1646
Total	12,224,736	2,220,583	1816

THE UNITED KINGDOM'S IMPORTS.

The imports of hops into the United Kingdom in 1905 were the least in many years, which may be accounted for by the unusually large imports in 1904, viz, 34,705,440 pounds, valued at \$8,836,103, those from the United States for that year amounting to 16,528,068 pounds, valued at \$5,264,578. Taking the aggregate imports of hops into the United Kingdom for the five years ended December 31, 1905, would give an annual importation for those years of 18,905,242 pounds, valued at \$4,024,400, which may be assumed as the normal yearly import, although British demand for foreign hops would seem to be increasing.

Referring to the exports of American hops to the United Kingdom for the year ended June 30, 1906 (13,026,904 pounds, valued at \$3,125,800), it is well to note that 9,326,975 pounds, valued at \$2,156,900, were exported during the six months ended June 30, 1906, which would tend to show that the British consumers anticipated the decrease in their own hop product; otherwise future demand upon the American producers must be very large.

SUGAR INDUSTRY.

FRENCH CROP THIS YEAR.

Consul Chapman Coleman, of Roubaix, furnishes official statistics relating to the French sugar crop for the year ending August 31. He says:

During this season 292 mills have been in active operation, against 270 in the preceding year, with the following results: The amount of

beet extract subjected to purification has been 97,904,142 hectoliters, 24 liters (1 hectoliter=26.4 gallons, 1 liter=1.05 quarts), against 55,890,540 hectoliters, 73 liters for the preceding year, the mean density of this extract being the same, 5.44, for each of these periods. On the assumed legal basis of 1,500 grams of refined sugar per hectoliter, together with that of the ascertained degree of density of the beet extract subjected to purification, the yield of refined sugar, including that contained in the molasses products, should be 984,671,855 kilos (kilo=1½ pounds) for the present, against 562,736,217 kilos for the preceding year, a gain of 421,935,638 kilos. A comparison of the returns for the two seasons shows 12.18 per cent of refined sugar obtained in the season just elapsed and 12.05 per cent in the preceding season upon the respective weights of beet root employed.

MADEIRA REFINING PROCESS.

Consul Maxwell Blake, of Funchal, states that the advantage of the Hinton-Daudet sugar refining process, in use on the island of Madeira, is scientifically enumerated as follows:

(1) Single crushing. (2) Defecation of the juice and its filtration after defecation in its own megass (or cane waste) in diffusers. (3) Recovery of all sugar in juice and megass, with a loss of 0.36 to 0.4 per cent. (4) The megass, after being passed through a mill to extract the waste, is used as fuel in the ordinary way. (5) Total abolition of all skimmings, filter presses, and the acidity resulting from their use. (6) A defecated juice unaffected in purity and perfectly brilliant. (7) A much higher yield of sugar, entailing less expense and less fuel, as the defecation of the juice is made in special heaters with the use of exhaust steamers.

CUBA'S CROP.

The Havana Telegraph says that the prospects for the Cuban sugar crop are "indefinite," and that it would be impossible to hazard predictions as to its size. It says that in any event the crop will be late, and that the number of laborers which can be secured will be greatly below the actual requirements for securing the crop. It is difficult for the planters to obtain the necessary advances on their production from banks to enable them to pay laborers and secure their crops to the best advantage. The amount of the crop, it says, will be considerably reduced from last year, but it predicts an increase in the price of sugar. The reports from Europe indicate that the sugar crop will be considerably less than last year.

TARIFFS.

RECENT CHANGES.

FRANCE.

POSSIBLE INCREASE ON OILSEEDS AND OILS.

Consul A. Gaulin, of Havre, expresses the belief that France will soon legislate higher import duties on oilseeds and on oils. He writes:

The advocates of higher tariff duties on oilseeds and oils were very active during the last session of the French Parliament, and all indications point to a renewed agitation during the coming session. The need of additional revenue may lead the Government to indorse a bill adding to the present rates, and that would mean its passage. A bill has been framed in the interests of the colza (rape seed) growing districts, no other oil-yielding seed being cultivated to any extent in France. It is claimed that the growing of colza has decreased over 50 per cent in forty years, owing to the competition of foreign oilseeds. It is held that colza oil will necessarily disappear as an illuminating oil, but has a great future for lubricating purposes.

The bill now pending takes oleaginous seeds off the free list and imposes upon them a duty according to their estimated yield in oil. The proposed rate of duty on colza seed which contains 39 per cent of oil is fixed at \$5.79 per ton of 2,204 pounds. The duty on undecorticated cotton seed is fixed at \$2.89 and decorticated cotton seed at \$4.82 per ton of 2,204 pounds. The rate of duty on oil is raised from \$11.50 to \$23.10 per ton of 2,204 pounds. Concrete oils will be admitted free, as well as oil cake containing less than 11 per cent of oil. Oleaginous seeds from the French colonies will also remain on the free list. Provision is made for the temporary admission of oilseeds which will be crushed for export.

It would seem that American seed oil should benefit by the change. But it is certain that the proposed duties would mean higher prices and a reduced consumption. The free importation of oilseeds from the French colonies would be detrimental to the trade in American cotton-seed oil, as the groundnuts (arachides) from the west coast of Africa yield an edible oil very similar to but of better quality than the best grades of cotton-seed oil.

GERMANY.

FLOUR, COCOANUT OIL, AND SWEETMEATS.

According to the Deutsches Handels-Archiv for July, the Bundesrath has authorized the duty-free importation, under the conditions governing "improvement" trade, of the following:

1. Wheat flour deposited under official supervision in a customs warehouse and destined to be worked up into wheat starch and gluten for exportation.

2. Coconut oil for the purpose of being refined and shortly afterwards reexported.

Switzerland having joined the Brussels sugar convention, Germany has given her the conventional duties on sugar, sweetmeats, and chocolates of 40 marks (\$9.52) for sweetmeats made of sugar and other sugar goods, and 50 marks (\$11.90) on chocolate goods per 100 kilograms (220 pounds).

SPAIN.

COMMERCIAL TREATY WITH SWITZERLAND.

Referring to the commercial agreement between Spain and Switzerland, Minister William M. Collier reports from San Sebastian, as follows:

A *modus vivendi* is established from September 5 to November 20. During this period Swiss imports into Spain are to be dutiable "according to the second tariff, with all the reductions of the existing treaties." The increased tariff rates established by royal order of July 1 and by royal decree of July 29 are abrogated. The new royal order is in all respects like the one putting into effect the American agreement. The royal decree recites that to begin with, on September 5 there will be applied the second tariff, with the rebates stipulated in the existing treaties. The permanent treaty will not be published until presented to the Cortes.

DENMARK.

LOWER DUTIES ON RAW MATERIALS—INCREASES ON LUXURIES.

The Danish Government proposes to change its tariff law, and Minister of Finance Lassen has introduced a bill in Parliament embodying the proposed changes. The duties on raw materials and some protective duties are lowered, while luxuries will be more heavily taxed. The sugar duties are adjusted so as to enable Denmark to join the Brussels sugar convention.

The bill exempts from duty petroleum, salt, coal, chemicals, gums, tar, tallow, hoop and bar iron, and thread. It reduces the duty on coffee from 12½ to 5 öre (one-fourth of a cent) and on sago to 1 öre. The duty on oils is reduced about 30 per cent, margarin and stearin 68 per cent, timber 24 per cent, leather 12 per cent, manufactured goods 14 per cent, machinery from 10 to 5 per cent *ad valorem*, coarse hardwares 30 per cent, and paper 19 per cent. The duty on tobacco is increased from 20 to 40 öre a pound and on cigars from 83½ to 116 öre per pound. Fruits are increased 82 per cent and preserves 44 per cent.

It is calculated that the total revenues will be reduced by \$2,125,000, but this will be partly compensated for by the stamp duty on spirituous liquors and other duties.

NETHERLANDS.

CERTAIN BUCKETS MADE CUSTOMS FREE.

A customs decision is announced in the Netherlands admitting free of duty tinned-iron pails and buckets for dung and manure. These are to be without handles, in lieu of which a pipe is placed obliquely for fixing a wooden pole, being now classed as agricultural implements.

BRAZIL.

STILL HIGHER RATES IN PROSPECT.

In transmitting a copy of the *Diario Official* of the Brazilian Government containing the project for the modifications in the existing tariff, Ambassador Lloyd Griscom reports as follows:

This project has been brought into the Chamber of Deputies by a committee and is now being considered in detail by the Chamber. The Chamber has already acted on a few of the clauses, approving some but making considerable changes in others. For instance, the committee proposed to increase the tariff on flour from 25 to 50 reis per kilogram, and on wheat from 10 to 20 reis per kilogram, but the Chamber, on the first reading, adopted 35 reis on flour and 15 reis on wheat. This increase in the duty on flour would make it more and more impossible to profitably import flour from the United States.

An examination of the project shows that the tendency is to increase the tariff very considerably, the figures varying from 20 to 50 per cent. In the case of rice the increase is even 500 per cent. A few articles remain the same and a very few are reduced. The Chamber up to the present seems disposed to adopt some increase, but not so much as proposed by the committee. The action of the Chamber is being taken from day to day on individual clauses, and it is therefore impossible to report more fully at present. The final passage of the tariff law does not usually occur until December 31, the last day before Congress adjourns.

Attention is called to the proposal for a sliding scale of the amount of duties payable in gold. It is proposed to vary the proportion payable in gold as the rate of exchange varies. With the rate of exchange nearly 17 pence for a milreis, as at present, the importer would pay 60 per cent of the tariff in gold, instead of 35 per cent under the existing law. If this sliding scale were adopted the effect would be to very considerably increase the amount paid by the importer without regard to the tariff rates.

HAITI.

SUMMARY OF NEW LAW NOW IN EFFECT.

Minister H. W. Furniss transmits from Port au Prince the translation of a new Haitian tariff law, stating that in accord with the civil code all laws become effective twenty-four hours after publication. The Secretary of Foreign Relations informed the minister that the Government of Haiti would allow goods on boats arriving August 23 and 24 to be entered on the old tariff, but that all goods subsequently arriving by boat, wherever and whenever loaded, would be required to pay the rates of the new tariff. A summary of the law follows:

All import duties whatsoever shall be payable in American gold, or in paper money at the rate of 300 per cent. One-half of the whole amount of a bill for importation duties, to wit, 50 per cent paid in paper money at 300 per cent shall be paid over directly to the withdrawal funds, and in the other cities to the public-treasury service for the account of the withdrawal. This half of all bills for import duties shall be burned within eight days at the farthest.

The surtax of 25 per cent gold in import duties is and remains suppressed. If the Government shall feel the necessity thereof, it is authorized by a simple decree to reestablish on the foodstuffs the old duties as they were prior to the present law. In that case the 4s. 8d. of import duties appropriated to (withdrawal of) paper money, paid in gold, shall be paid over to the withdrawal fund and in other cities to the treasury service for the account of the withdrawal. These amounts shall be sold for paper and the proceeds burned.

Under date of September 6 the President of Haiti issued a proclamation embodying the new tariff, which reads:

ART. I. The tariff of import duties annexed to the law of September 4, 1905, regulating the customs of the Republic, with the duties for wharfage, weighing, consular visée, tonnage, signaling, pilotage on entrance, sanitary visit, the surtaxes of 50, 33½ per cent in national money, and 25 per cent gold on the total of these duties and surtaxes, or as they may be modified by future laws, is the minimum tariff.

ART. II. There is established a maximum tariff composed of the present tariff or as it may be modified by future laws, augmented by 50 per cent to be collected on the total amount of these duties and surtaxes.

ART. III. The maximum shall not be applied to statistic duties applicable to specie moneys.

ART. IV. The Government is authorized to enforce the maximum tariff, by a decree, on the countries that apply heavy duties on our commodities and produce.

VENEZUELA.

RATES ON AUTOMATIC SCALES, ETC.

Consul E. H. Plumacher, of Maracaibo, sends the following Venezuelan customs decree:

Automatic scales to weigh a person by throwing into the slot a piece of money, generally a nickel, or 0.12½ bolivars, and all such kind of machines, shall be placed in the fourth class (0.75 bolivars per kilogram), but other automatic scales or machines which produce music or return the money as a game of hazard shall be placed in the fifth class of the national tariff (1.25 bolivars per kilogram).

HAITI.

NEW SHIPPING REGULATIONS.

Minister H. W. Furniss forwards from Port au Prince copy of a new Haitien law making an addition to the customs laws as follows:

The differences of surplus that shall be found shall immediately form the nucleus of a supplementary account for which the State should demand the judicial condemnations foreseen by the repression of smuggling. The State shall only take provisional security by attachment, bail, or any other means on the values, merchandises, and property of the exporter, notwithstanding opposition of appeal.

The agents of steamship lines established in Haiti shall be required, under penalty of withdrawal of their licenses, without prejudice of all other penalties, to transmit regularly, little by little, within a maximum delay of three months, the weight given on which the freight of all commodities shipped from Haiti has been collected at the port of destination.

TREATY WITH FRANCE EXTENDED.

Mr. Henry W. Furniss, minister to Haiti, reports, under date of October 10, that the Republic of Haiti and the French Republic have concluded an agreement to again prorogue, provisionally, the com-

mercial convention made July 31, 1900, between Haiti and France, and that the following decree has been proclaimed:

“The commercial convention signed July 31, 1900, between the Republic of Haiti and France is maintained in force for another period of three months—from October 31, 1906, to January 31, 1907.”

MEXICO.

GENERAL ADVANCE IN RATES.

Consul-General Gottschalk, of Mexico City, reports the publication of a decree on October 13 whereby all merchandise imported into Mexico through the port of Puerto Mexico (Coatzacoalcas) after January 1, 1907, and until further orders shall be taxed an additional duty of 2 per cent upon the total values of the duties assessed upon the merchandise itself. This is an increase of but $1\frac{1}{2}$ per cent upon the former duty of $1\frac{1}{2}$ per cent which had been established by the decrees of October 26, 1893, and June 4, 1896.

UNITED STATES DECISIONS.

BOARD OF APPRAISERS AND OPEN HEARINGS.

Germany asked last spring for the adoption of open hearings in customs cases before the Board of Appraisers in New York and the request was granted. In the past few years there have been many controversies between importers of German products and the customs authorities regarding the dutiable values to be attached to the entries, and such disputed questions have been adjudicated by the Board of Appraisers, which is the tribunal of last resort in cases referring to values. It was contended that if the Board of Appraisers met in public there would be a fairer administration of justice. As a consequence an order was issued to the Board to hold open hearings whenever in its judgment the public interests would not be jeopardized. The order went into effect early in the spring and several months' trial has developed that very few requests have been made to the Board for open hearings, while in those instances where the concession was operative importers called as witnesses refused to attend and be subjected to examinations likely to divulge trade secrets.

DUTY ON ARTIFICIAL SILK YARN.

Judge Fischer, of the United States Board of General Appraisers, recently decided that the collector of customs at New York, was right in assessing duty on artificial silk yarn at 30 per cent *ad valorem* as silk yarn by similitude. The importers claimed that such yarn should be dutiable as cotton thread or yarn at 10 per cent, or not exceeding 20 per cent. The ruling practically reversed a previous decision which imposed duty by similitude to cotton yarn. But the judge, in giving his decision, stated that the Government had shown conclusively that this artificial silk differed so much from cotton yarn in its essential characteristics that it can not be said to resemble it at all, but that it is exactly like silk yarn in its appearance, use, and the method by which it is formed into a yarn. After the testimony was all in counsel for the various importers interested acquiesced in the correctness of the classification of the goods as silk yarn by similitude and abandoned the claim that they should be classified as cotton yarn.

MISCELLANEOUS.

PROGRESS OF THE RUBBER INDUSTRY.

CEYLON.

REMARKABLY SUCCESSFUL RESULTS ALREADY RECORDED.

Consul-General William H. Michael, of Calcutta, says Ceylon is capable of yielding a large part of the world's rubber supply. The production of rubber is proceeding rapidly and intelligently in all parts of the island. It is the most attractive industry on the island and promises the richest rewards.

In 1865, when her coffee plantations went down before a disease that no one was able to check, Ceylon turned to rubber. The results surpassed expectations. Year after year the acreage assigned to rubber trees increased till it is now 75,000 or more acres. In 1900 there were 1,750 acres, yielding 7,300 pounds. These sold at \$1 per pound. In 1905 there were 40,000 acres; the yield was 150,400 pounds, which were sold for \$1.58 per pound. The 75,000 acres of to-day will doubtless yield a correspondingly larger amount, for which a correspondingly larger price will be paid. The Ceylon rubber, largely of the Para kind, contains 94 to 95 per cent caoutchouc and loses only 1 per cent in washing; hence its high price.

RUBBER INCREASES IN PRICE.

The rise in price in recent years of Para rubber was rather remarkable. For example, it was \$1.19 per pound in 1903, \$1.42 in 1904. The rise in price in recent years of fine Para and plantation Para rubber is also worth noting. For example, fine was \$1.16½ in 1903 and \$1.28 to \$1.29½ in 1906; plantation Para was \$1.19 in 1903 and \$1.43 to \$1.45 in 1906. As it costs little either in care or in coin to cultivate rubber, Ceylon is taking to it kindly. The island is eminently suited both by soil and climate to its cultivation. The yield to each tree is about 2 pounds, and the trees run 120 to 150 to each acre, thus yielding from \$300 to \$450 an acre. Not only Ceylon, but India, Burma, Java, Borneo, and the Malay Peninsula are putting in rubber trees whenever possible, and usually the Para variety.

Consul-General Michael calls attention to an exposition of rubber products to be held in Paradenya, three and a half hours by rail from Colombo, capital of Ceylon. It is the first strictly rubber exposition ever held anywhere. It would pay Americans interested in rubber, either as manufacturers or producers, to be present either in person or by representatives.

WORLD'S PRODUCTION.

DEVELOPMENT IN BRAZIL.

In connection with this subject it is interesting to note the work going on in Brazil's production of rubber, as reported by Export, a

leading German trade journal. The writer thinks it is possible to push the rubber-yielding plants, parasites, and trees to the high position compared with their yields, qualitatively and quantitatively, in the past occupied by the sugar-beet roots of to-day, compared with those of seventy-five or one hundred years ago, when the beet-root sugar began its wonderful career. There seems to be no good reason why careful selection, scientific planting, care in the choice of suitable sites for the rubber orchards, etc., should not yield as rich a harvest in rubber as similar efforts have secured in so many agricultural and horticultural lines. While admitting the Tropics and sub-Tropics as best suited to the production of the plants and trees that yield rubber, he sees no reason why a careful investigation may not hit upon plants or trees in the temperate zones where sap can be converted into rubber, sap which, if not chemically caoutchouc, is at least so like it as to serve the purpose to which caoutchouc is put.

CULTIVATION IN JAMAICA.

A letter from Jamaica, printed in the London Telegraph, states that many banana planters in Jamaica are giving up the production of bananas and planting rubber trees. The writer of the letter, who set out rubber plants six years ago, has met with great success. He predicts that rubber cultivation will become large and profitable in Jamaica. He says that a friend of his in Costa Rica receives \$45 a year from only five trees. Rubber trees are not easily affected by a hurricane, as is the case with bananas. The cultivation of rubber is expanding greatly in various countries, but the demand is constantly increasing.

THE CEYLON PRODUCT.

The writer thinks the Ceylon rubber is superior to that of the Brazilian forests because of the better care bestowed upon it. Experts in Para say that the best soil for rubber is a loamy soil with rich humus, not swampy, but still subject to rich rain showers. To succeed best, they think the atmosphere of the rubber orchard should be warm and moist. It would seem as if parts of the Amazon country contained ideal conditions. And yet, the writer remarks, only a Raubban—a robber or wanton-like gathering is liable to go on in the Brazilian woods. This will yield large quantities as long as the primeval forest furnishes trees; but, above a certain increase, the yield will never pass. The poorer kinds of rubber are being cultivated in central and southern Brazil. If there is a large increase in the better and middling grades elsewhere the movement in Brazil may be seriously affected. At one time it furnished 75 per cent of the world's total supply. This fell off to half. Still it has in its soil and climate the capacity to go up again to its former position.

The loss of its sugar trade, then of its raw-cotton trade, and the recent falling off in receipts from coffee has led Brazil to look for a substitute for all these products.

This, she thinks, is to be found in rubber. From Maranhão, in the north, to San Calarnia, in the south, trees of the coarser or inferior kinds are being planted. These grades are increasing. In 1903 Brazil exported 662 tons of Maugabeira rubber, worth about \$483,200, and of Marricoba rubber, 1,722 tons, worth \$1,646,000. In 1904 she exported of these, respectively, 855 tons, worth about \$762,000, and 2,216 tons,

worth \$2,330,000. At 83 cents for 2.2 pounds, raising rubber in Brazil does not pay, and that was the average price for the inferior grades. When the export tax of 23 per cent of the market price is added, as it is in many provinces, plus all the other costs, raising rubber of the cheap grades is far from being what it might be or what it ought to be. The yield of Para in 1899–1900 was 9,957 tons, valued at \$13,930,000; the yield for 1904–5 was 11,740 tons, valued at \$16,849,725.

BELGIAN CONSUMPTION.

ANTWERP THE WORLD'S GREATEST MARKET.

Consul J. C. McNally reports that the rubber industry has risen in Belgium to one of great importance.

The port of Antwerp, he says, is the distributing center of the world for this article, and is at the same time the world's greatest market. The yield of the Kongo Free State is sent in, which amounts to nearly 10,000 tons yearly. The manufacturers do not confine their operations to the Kongo rubber alone. They work the South and Central America, West Indies, Madagascar, Java, and other rubbers. The Belgian manufacturers make countless varieties of articles from the product.

The declared value of the imports last year for Belgian use was 18,705,136 pounds of raw rubber, valued at \$14,768,554. Exportations were 14,965,977 pounds, valued at \$11,816,410. Of worked rubber the declared importations were 1,194,431 pounds, valued at \$632,832; exportations, 340,055 pounds, valued at \$267,423. The above figures apply only to the special commerce or that used in Belgium. The quantities and values of that passing through the country is many times in excess of the above figures.

TRADE ACTIVITY.

INCREASING BORDEAUX IMPORTATIONS—PROTECTION OF TREES.

Late statistics of the rubber trade in Bordeaux, furnished by Consul D. I. Murphy, show a constant and steady development of the industry.

The imports increased from 2,601,947 pounds in 1904 to 3,927,076 pounds in 1905. In the first seven months of the present year 2,882,932 pounds of rubber were imported here from the African fields, against 2,016,190 pounds for a corresponding period of 1905. At an average price of 78 cents (the prevailing figure) the value of the imports from January 1 to August 31 of this year was \$2,248,686. The rapidly increasing activity of the French automobile industry, with the consequent enormous demand for rubber, and the fact that Bordeaux is the nearest European port to the African fields, will in the course of a few years largely centralize the trade here.

The fears expressed by the importers that the increased demand would not be met with an adequate supply have been happily dissipated by the action of the French Government, which took active measures to prevent the wholesale destruction of the rubber trees. Reports were current here that the blacks, with a deplorable lack of foresight, were actually cutting down the rubber trees in enormous numbers so as to get the gum quickly. It was stated that whole regions had been already devastated by this wholesale destruction. The

French Government, however, took the matter in hand, established schools of instruction in Senegal, Niger, and the Ivory Coast, where the natives were taught to extract the gum by systematic if not scientific methods. The natives were forbidden under penalty to cut down the trees, and in the devastated regions the Government agents planted thousands of rubber trees of the Ceara species, the hardiest of the rubber plants.

At the Marseille Exposition a large lot of this particular kind of rubber is on exhibition and attracts considerable notice. Late reports are most encouraging and the importers here look forward to the day when Bordeaux will supplant both Liverpool and Antwerp as the center of the rubber trade.

GOOD ROADS.

SUCCESSFUL RESULTS IN FRANCE—APPLICATION METHODS.

Consul-General Frank H. Mason writes from Paris that in a newspaper paragraph published in America during the past summer the statement was made that certain American tourists, traveling by automobile through France, had been annoyed by the coal tar on certain roads adhering to the wheels and being thereby spattered over their car and the clothing of its occupants. Mr. Mason continues:

The impression created in some quarters by this publication has been that tarred roads have not, on the whole, proved successful in this country. In reply to several inquiries on this subject from persons interested in road improvement in the United States, the following information has been obtained from authentic sources:

The treatment of macadamized roads and streets with crude petroleum as a preventive of dust in summer and mud in winter was first attempted in southern France ten or fifteen years ago, and appears to have been successful for the suppression of the dust caused by ordinary traffic. But for obvious reasons the use of petroleum soon gave way to that of coal tar, which, as a by-product of gas manufacture, can be bought in nearly every district of France for 5 to 7 centimes per kilogram; that is, \$10 to \$12.50 per metric ton of 2,200 pounds. Coal tar has the additional advantage that, unlike oil, it hardens when exposed in a thin layer to the action of the air, covering the surface of the road with a practically air and water-tight skin, which not only holds down the dust in dry weather, but prevents water from penetrating the roadway in time of rain, provided the road itself is well constructed and the tar properly applied.

FRENCH SYSTEM.

One of the first important experiments made by the French department of bridges and roads, was on the national route from Oran to Mers-el-Kébir, in the Algerian department of Oran. The test was made on a portion of the road leading from the city to a quarry, and over which the hauling of stone is heavy and constant throughout the year. The success of the system was fully demonstrated, and it has since been adopted and applied to many country roads and macadamized city streets throughout France. From evidence carefully col-

lected and confirmed by the "Touring Club de France," it appears that tarred roads have been uniformly successful wherever the conditions have been normal and the work properly and thoroughly performed. The following conditions are essential: That the road shall be solid, well built, properly drained, and free from subterranean infiltration of water. The surface of the roadway shall be first swept, then washed free of dust, and allowed to remain undisturbed until completely dry. The operation of tarring shall be undertaken only in warm weather. The surface of the roadway shall then be spread with a coating of hot liquid coal tar, of such consistency as to be readily spread with a broom, so as to even up slight depressions and completely cover the surface. While the tar is still soft it should be strewn with a coat of clean sand or fine gravel and then left to cool and harden. Five or six days later a second coating of tar and sand should be applied in the same manner.

For the first coating the quantity generally used for country roads is 12 liters (about $3\frac{1}{4}$ gallons) of liquid tar for 8 square meters (86 square feet, or $9\frac{1}{2}$ square yards). For the second application the quantity generally used is about 1 liter per square meter of surface. The durability of such a tarred roadway surface depends naturally upon the quantity and character of the traffic which it is required to sustain. Motor carriages, with pneumatic tires, are the least trying to such a road; sharp-shod horses and heavy, iron-tired wagon wheels the worst.

NOT DESIRABLE ON STEEP GRADES.

Tar laid on a wet surface dried slowly and unevenly and in most, if not all, cases where the wheels of motor cars or other vehicles have picked up fragments of tar it has been because the freshly tarred road has been used too soon after the application or water underneath the tar coating has prevented its proper hardening. Tarred roadways are not recommended in this country for steep grades, where their smooth surface might be slippery and dangerous for horses, but in other locations they give to a well-built macadamized or hard-graveled road a clean, firm surface practically free from dust in dry, and mud in wet, weather. They are hard and smooth, with a gritty surface, which gives a firm foothold under all conditions of weather.

Another point of important advantage in France is that tarring protects the roadway from wear, especially the washing away of dust and loose fragments of stone by frequent rains, which under heavy traffic soon cuts the surface into inequalities that require attention and repair. The cleaning by machinery, which would soon abrade and ruin the macadamized road, has no effect on a tarred surface, which forms a matrix by which the gravel and pulverized stone are held firmly together and rendered waterproof. The system has not been long enough in use to furnish complete and conclusive statistics, but the cleanliness and comfort of tarred roads is fully conceded, and the protection of the macadamized surface from wear and tear effects an economy which goes far toward balancing their additional cost.

EXPERIMENTS IN ENGLAND.

Consul Frank W. Mahin, of Nottingham, reports that all over England governing bodies are experimenting with dust layers.

Chloride of calcium is successfully used in Nottingham streets. In a western rural district oil tar has been applied with reported success.

The first application cost \$73 per mile on a 6-yard road, and at the end of six weeks was said to be still perfectly effective. A second application would, it is estimated, cost \$34. The exponent of this dust remedy considers two dressings a summer sufficient—one at the beginning and the other six or seven weeks later. Still another recommended dust remedy is tar from gas works, declared to be both cheap and effective. Two coats a season applied on a road 8 yards wide is estimated to cost \$292 a mile. A prize is offered by interested parties, in the county of Kent, for the best machine to apply the tar, with a view of reducing the expense.

EXPERIMENTS TO BE MADE.

Consul W. C. Hamm, of Hull, reports that an important experiment is about to be carried out on 3 miles of the London-Portsmouth road by a joint roads and automobile committee.

The 3 miles will be divided into 12 quarter-mile portions, each to be treated with different materials. The first section will consist of the existing granite road, which has been recently repaired. The next length will be hand painted with tar, and it is expected this will not only lay the dust, but will also give the road a longer life. The third length will be treated with Taefelt, a patented material combining some of the properties of tar and asphalt. This will be laid about half an inch thick, and it is claimed for it that it will waterproof the road and provide a nonslippery surface absolutely free from dust. Another section will be treated with granite and Taefelt. The other sections are to be treated with various compositions, in all of which tar seems to play an important part. It is proposed to continue this experiment for seven years. Reports are to be issued quarterly, giving such detailed statements as to expense as will give local authorities all over the kingdom the fullest opportunity of judging what the cost would be in their own districts.

DENATURED ALCOHOL.

REGULATIONS CONTROLLING PRODUCTION AND USE.

J. W. Yerkes, Commissioner of Internal Revenue, has issued the departmental regulations controlling the making of denatured alcohol, its handling, and uses. These regulations will render effective the law passed by Congress to take effect January 1, next, and provide for the withdrawal from bond, tax free, of domestic alcohol when it is rendered unfit for beverage or liquid medicinal usage by the admixture of suitable denaturing materials. The tax now amounts to about \$2 per wine gallon on alcohol at 180° proof, and the denatured article after January 1 will be free from that tax. Mr. Yerkes, speaking on the subject, said:

There will be two classes of denatured alcohol—first, that styled “completely denatured,” which will pass into general use for general consumption, and can be purchased at the stores without limiting regulations as against the private consumer; and second, “especially denatured,” in which the material demanded by the needs of manufacturing

interests will be regarded. As to this latter there are limitations confining it to the special manufacturing industry for which it is prepared.

This especially denatured alcohol will be kept under strict surveillance and governmental supervision.

For the completely denatured article 10 parts of wood or ethyl alcohol and one-half part of benzine will be added to 100 parts of ethyl alcohol. In other words, to every 100 gallons of ethyl alcohol will be added 10 gallons of wood alcohol and one-half gallon of benzine.

WHERE THE WORK WILL BE DONE.

The denaturing process will be accomplished on the distillery premises where the alcohol is produced, in special bonded warehouses designated and used alone for denaturing purposes and for the storage of denaturing materials. These buildings and the operation itself will be under closest governmental inspection and control. Denatured alcohol will supplant very largely the consumption of wood alcohol for both domestic and manufacturing purposes, as it will be cheaper.

While the price of the completely denatured product can not now be definitely stated, it is believed it will not be more than 35 cents a gallon. The price of the specially denatured alcohol will naturally vary according to the cost of the denaturing ingredients selected to meet the necessities of the manufacturing industries. These special formulas will only be used where it is made perfectly apparent to the Department that the industrial interests involved can not use completely denatured alcohol by reason of the presence of wood alcohol or benzine. In that case some other denaturing agent or agents, which will accomplish the purposes of destroying, as far as possible, the potable or beverage qualities of the alcohol, and at the same time adapt the denatured article to the special ends desired, will be determined upon.

The adoption of this legislation will require some extension of the force of the Internal Revenue Bureau, especially for field work. It will also add very largely to the work of the chemical division of that Bureau.

GREAT BRITAIN.

MORE LIBERAL REGULATIONS.

The commissioners of inland revenue in the United Kingdom have issued new regulations affecting the sale of methylated spirit. Heretofore a retailer of such spirit in the United Kingdom could not have in his possession more than 50 gallons and could not sell at one sale more than 1 gallon. Under the new regulations he is allowed to hold a stock of 200 gallons and to sell 4 gallons at one sale. If this concession is abused it will be revoked, according to the statement of the commissioners. The London Times says:

Although methylated spirit is rendered so nauseous by the addition of wood naphtha and mineral naphtha, it has frequently been used in various parts of the country as a beverage; in fact, in Aberdeen it was at one time in common demand among a degraded class as an intoxicating drink. It has also been used as an ingredient of medicine for internal use, but this practice has been rendered almost extinct by inflicting heavy penalties on offenders. There are at the present time about 18,000 authorized vendors of methylated spirit in Great Britain. The use by manufacturers of a special methylated spirit known as industrial alcohol is also provided for by the revenue act under conditions which will lessen the cost by about 5d. per proof gallon. The effect of this latter concession will be to enable British manufacturers to make something over a hundred chemical products which at the present time can not be economically produced in this country on account of the cost of alcohol.

PRICES AT HOME AND ABROAD.

AMERICAN MANUFACTURES IN FOREIGN MARKETS—FRENCH REGULATIONS FOR SALE OF TOBACCO.

In response to inquiries from parties in the United States as to whether American manufactured products are sold in France at lower prices than are demanded by their manufacturers for the same products in this country, and whether articles manufactured by foreign governments are sold abroad at lower prices than at home, Consul J. Martin Miller, of Rheims, reports:

The retail prices of American merchandise sold in France are not fixed by the manufacturer any more than the prices of breakfast food manufactured in Ohio, flour made in Minnesota, or meat canned in Chicago are fixed with the retail dealer in a rural Indiana community or the retailer in metropolitan New York.

Typewriting machines that usually sell for \$100 in the United States are sold in France at \$110 to \$115. Machines of the same price that are unknown here, and are just entering this field, may cut their prices somewhat or make some concession against their competitor who is well established.

American shoes are higher in Europe, generally speaking, than in the United States. Certain New England manufacturers dealing exclusively in \$3.50 shoes, which are sold only in their own retail stores in the large cities of the United States, have established stores in the principal cities of England, particularly London, where they sell shoes for practically the equivalent of \$3.50 in English money. Ocean freight to London is not so high as freight from New England to Denver. The same shoes sell for the same price in the town where manufactured, or in Boston, as at Denver or London.

REGULATION OF PRICES FOR TOBACCO.

In France the manufacture and sale of tobacco is a Government monopoly. The Government owns the tobacco factories and has direct control of all retail tobacco stores. Three zones have been established within the Republic. A fixed price is charged for manufactured tobacco in each zone, and each zone has its own price. The first zone borders on the frontier, near foreign countries. Here tobacco is cheapest because the inhabitants can step across the border and buy cheaper than if the prices were as high as in the second or third zones. Of course only broken packages can be brought across the border into France, so the low price in the first zone meets the competition that is so near, swells the sales of French tobacco, and reduces the temptation for smuggling.

In the second zone, which begins, say, 10 to 20 miles from the frontier, but the boundaries of which are irregular, depending upon the location of towns, the prices are from 10 to 20 per cent higher than in the first zone. In the third zone, which comprises the central portion of France, the prices are 10 to 20 per cent higher than in the second, and 20 to 40 per cent higher than in the first zone. For different kinds of manufactured tobacco the percentage of the advanced price in the different zones varies.

For example, cigarettes that are put up in blue paper packages of twenty each sell in the first zone (say Givet), close to the Belgian

border, at 40 centimes (8 cents); in the second zone at Sedan at 50 centimes (10 cents) in green packages, and at Paris in the third zone at 60 centimes (12 cents) in pink packages. Of course there are cigarettes of cheaper quality and others higher, but the prices are different in each zone. It is unlawful to take unbroken packages of tobacco from one zone into another, or from a foreign country, and the officials know at once, from the color of the packages, where tobacco has been purchased.

LOWER PRICES IN BELGIUM.

Dealers in Belgium sell French tobacco cheaper than it is sold in the second or third zones of France, but the price varies there, because every dealer is a "law unto himself" in the regulation of the prices of French tobacco outside of France. The duty on tobacco exported to Belgium is as follows: Seventy-five francs per 100 kilos (220 pounds) on unmanufactured tobacco; 55 francs on leaf-ribbed tobacco, and 600 francs (\$116) per hundred kilos for cigarettes. In Germany French cigarettes sell at about the same price as the medium or second price in France.

While the tariff on tobacco in other countries bordering on France (except Italy and Spain, where tobacco is also a Government monopoly) varies, practically the same conditions regarding the sale of French tobacco prevails in Switzerland and England in that tobacco sells for a lower average price in those countries than the highest or third zone price in France, and in some countries lower than the second highest or second zone price in France.

The claim has been made that three different qualities of tobacco are manufactured for the different zones and that the highest grade can be purchased only in the middle of France or the third tobacco zone, and that the second quality only is sold in the second, and the third quality only in the third zone, which is to say that the farther away from the center of France the people live the poorer the tobacco they use. Careful investigation has failed to substantiate this, but it does bear out the idea that the difference in the price of tobacco in the three zones is on account of the competition to be met at the frontier and that it is a discrimination in price.

REVENUE DERIVED.

In 1905 the tobacco monopoly earned the French Government a gross revenue of 436,006,900 francs, or \$84,149,262, and the match monopoly 49,188,700 francs, or \$9,493,419, a total of \$93,642,681. In 1906 the tobacco monopoly earned a gross revenue of 446,009,900 francs, or \$86,079,909, and the match monopoly 49,511,600 francs, or \$9,555,739, a total of \$95,635,648.

In Italy and Spain the tobacco business is conducted by the Government, as in France. In 1906 Italy had a revenue of 223,000,000 lira, or \$43,039,000, from the tobacco monopoly, and Spain in 1905 (latest returns) had a revenue of 172,561,001 pesetas, or \$32,304,273, from tobacco and lotteries.

PRICES DETERMINED BY LOCAL CONDITIONS.

The goods imported into France from England or any other European country do not always sell at the same wholesale price asked for similar goods in the United States or elsewhere, depending upon whether they are purchased in small or large quantities, whether the

entire output of a factory is handled by one wholesaler, whether the wholesaler contracts to purchase from the manufacturer a stated quantity of goods or a certain number of machines per month, etc., so that the manufacturer may know just how much material he will need and the number of employees he must keep steadily working.

Such conditions determine the natural laws of commerce the world over and have more to do with establishing prices than legislative acts. The French Government can establish three different prices for tobacco in three different zones of the Republic and prevent the cutting of these prices, and could do the same with flour or sewing machines if the Government made monopolies of these two articles, as it does of tobacco.

UTILIZING WASTE MATERIALS.

MANY MILLIONS IN VALUE FROM BY-PRODUCTS MADE OUT OF "WASTE."

Great changes have taken place in recent years in making use of what was once considered absolutely waste material, and as a result many millions of dollars have been added to the wealth of the nation.

Sawdust was looked upon at one time as waste material, says Moody's Magazine, but during the last few years a process has been discovered which has given sawdust a value greater than that of solid lumber. By the use of hydraulic pressure and intense heat the particles are formed into a solid mass capable of being molded into any shape and of receiving a brilliant polish. The only materials used are sawdust, alum, and glue. Imitation marble can be manufactured from a mixture of sawdust with ivory waste, water, glass, and glue. In Norway acetic acid, wood naphtha, tar, and alcohol are produced on a commercial scale out of sawdust.

Factories have been erected in this country and in Europe for converting pine needles into forest wool. This is used for mattresses and furniture, for manufacture into hygienic articles such as undervests and chest protectors. The principal use of sawdust seems destined to be in the production of sugar and alcohol. It is practically pure cellulose, and easily convertible into those products. For many years bituminous coal operators threw away slack as waste. Now it commands at the mines 75 cents a ton. The increase is largely due to the demand coming from makers of cement. Formerly they bought lump coal and pulverized it. Now they use slack. Quartz rock was not long ago considered worthless. Now glass is made from it. Coffins, tombstones, bricks, tilings, and similar articles can be made of this glass.

THE BY-PRODUCTS OF PACKING HOUSES.

Packing establishments have a long list of by-products. The blood of the slaughtered animals is congealed and manufactured into buttons, and is also utilized in the production of albumen for the use of calico printers, the sugar refiner, the tanner, and others. The bones are used for a score of different purposes, being manufactured into knife and toothbrush handles, chessmen, combs, backs of brushes, mouthpieces of pipes, and various other articles. Black hoofs are used in the manufacture of cyanide of potassium for gold extraction,

and also ground up to make fertilizer. Many articles, such as glue, fly paper, sandpaper, gelatine, isinglass, curled hair, bristles, wool felt, laundry soap, ammonia, etc., are now made from the former waste products of the abattoir.

The annual value of the by-products of the packing industry, all of which are manufactured out of what was considered waste material thirty years ago, is approximately \$200,000,000. Cotton seed not very long ago was waste matter, giving considerable trouble to get rid of; but in 1900 the by-products from cotton seed were valued in this country at more than \$42,000,000, which has probably doubled by this time. The vice-president of the Standard Oil Company is authority for the statement that for the last ten years more than one-half of the profits of the company have been made out of the manufacture of by-products.

PAPER FROM BAGASSE.

FAILURE OF SCHEME IN WEST INDIA ISLAND.

Consul A. J. Clare supplies further information relative to the proposition to manufacture paper from bagasse, or sugar-cane refuse, writing from Barbados:

Prof. Adolph Sahlstrom, of Sweden, proposed to form a syndicate to manufacture paper pulp from bagasse by a process which he had patented in this island. A so-called syndicate was formed, although in reality no agreement in writing was made. The principals were several local business men and the professor. No money was subscribed. Upon investigation it was found that the planters would not sell bagasse at \$5 per ton, the price which was offered by the syndicate. The offer was then raised gradually to \$10 per ton, and at this figure there was some talk of organization by the so-called syndicate, which proposed to purchase about 30,000 tons annually. The planters, however, upon second thought, decided not to sell the bagasse at that figure, as fuel would have to be purchased in its stead, which from an economic standpoint would not be profitable. The proposition has thus been abandoned by the so-called syndicate.

There is now some talk that a syndicate may be formed in British Guiana, where bagasse is more plentiful and not so much in demand for fuel as in this island, but the proposition has not yet gone beyond the talking stage.

DEFICIENT POSTAGE.

THOUGHTLESS CUSTOM THAT NEEDS CORRECTION.

Consular officers are subjected to an annoyance which amounts to imposition, involving considerable expense to those officers. This arises from thoughtlessness on the part of business men and others in the United States who address letters to consuls requesting information and send them circulars for distribution in their districts and who fail to fully prepay the prescribed postage. For example, a letter addressed to a foreign country must pay 5 cents for each half ounce or fraction thereof. Failure to prepay the required postage

makes the addressee liable for the deficiency and double the amount of such deficiency as a penalty. A foreign letter, weighing an ounce, with a 2-cent stamp is affixed would be deficient 8 cents, and the party addressed would be obliged to pay the deficiency and 8 cents penalty. Complaints are frequently received from consuls in regard to this matter, and attention has been called to it through the Daily Reports, notwithstanding which the practice continues and seems to be growing with the increasing growth of our foreign trade. Three communications from consuls on this subject are given below, to which attention is invited. From Montevideo Consul John W. O'Hara writes:

Frequent complaints have been made at this consulate by business people of this city that letters and packages are sent from America without sufficient postage. Some of the complainants say that the payment of penalties on underpaid mail is becoming burdensome, amounting in some instances to \$6 or \$7 per month. It might be considerably more were not a great many pieces refused as being of no apparent value. I am also informed that this underpayment rarely occurs in the case of letters from other foreign countries.

On account of the frequency of these complaints I have thought it proper to call the attention of manufacturers, exporters, and inquirers in general to this oversight. The rate postage on a letter of one-half ounce or less from the United States to this country is 5 cents. If deficient, there is charged, in addition to the shortage, an equal amount as penalty, so that when a letter weighing one-half ounce or less is mailed with a 2-cent stamp attached, the addressee must pay double the shortage, that is, 6 cents. If the letter weighs more than one-half ounce, as frequently happens, and bears only a 2-cent stamp, it is necessary to pay 16 cents (charge for 1 ounce) and 10 cents for every additional half ounce. This places an unnecessary burden on people who are making an effort to become acquainted with American goods and methods. Being compelled to pay penalties, even though small, does not tend to promote good feeling on the part of actual or prospective buyers.

EXAMPLES FROM FRANCE.

From Rheims, Consul J. Martin Miller furnishes a few cases illustrative of his experience:

The underpaid postage question on letters sent from the United States to consulates is a somewhat hackneyed one, but this does not seem to cause a diminution of such letters and postal cards as well as second-class mail matter.

I received recently a letter containing circulars to which there was affixed a 5-cent stamp. The overdue postage was 1.50 francs (30 cents). The information desired was somewhat technical and would require considerable time and research to obtain. A few weeks later a second letter was received stating that the firm had been awaiting my reply, and requesting me to make a special effort to secure the desired information. Upon this letter was a 2-cent stamp, so that I was called upon to pay 30 centimes, or 6 cents—3 cents for underpaid postage, and a like amount as a penalty. Occasionally American business firms send circular letters under a 1-cent stamp in an unsealed envelope. It is not too much to ask that firms mailing a

large correspondence each day have the foreign letters carefully sorted out by a clerk well informed about foreign postage and held responsible for their proper preparation for the mail. While many American establishments are careful about this, there are many others who are not.

PARTIAL REMEDY SUGGESTED.

Consul A. Gaulin, of Havre, calls attention to a special envelope marked "Foreign post," by which the leading English houses avoid penalty postage on their foreign correspondence. He writes:

Special envelopes bearing the words "Foreign post" printed in large type are used by a number of leading English houses for their foreign correspondence. This serves as a constant reminder to the mailing clerks that the domestic postage rates do not apply to the letters or packages so marked, and errors are thus easily avoided. I would suggest the adoption of a similar system by United States exporters. It might tend to decrease the large amount paid each year by consular officers for penalty postage on letters and catalogues sent them from the United States and on which full postage is not prepaid. It might also help to regain the good will of many foreign firms whose disaffection can be attributed to no greater and no other cause. The evil is evidently due to a lack of proper classification of mail matter in the offices of our merchants, and a simple method, like that above mentioned, would probably prove to be an effective remedy.

SLEEPING SICKNESS.

PRIZES OFFERED FOR SUBJECTION—VAN CAMPENHOUT'S REMEDY.

Consul-General G. W. Roosevelt, of Brussels, writes about an African malady as follows:

In view of the devastation caused by a disease known as the "sleeping sickness" among the natives of certain districts of the Kongo Free State, as well as among Europeans residing there, many of whom have returned to Europe afflicted with the disease, which has nearly always resulted fatally, the King of Belgium has offered a prize of 200,000 francs (\$38,600) to any person of any nationality who shall discover a cure for the said sickness, and also an additional sum of 300,000 francs (\$57,900) for the purpose of making researches and experiments toward exterminating the plague.

Learning that two cases of the "sleeping sickness" had been cured in Belgium by the treatment discovered by Dr. Em. Van Campenhout, of Brussels, I asked him to give me some information on the subject, and attach herewith an account of his treatment, which he kindly sent me. Doctor Van Campenhout spent many years in Africa, and has made an exhaustive study of the disease as it prevails among the natives, as well as the cattle of Africa. It is known that whole droves of cattle in districts bordering on the Transvaal are frequently destroyed by the sickness. It is also well known that the disease is caused by the sting of an insect known as the Tsétsé fly, which inoculates the victim, man or beast, with the germ called "Tripanosomæ," or "sleeping-sickness germ," the same as the mosquito carries and inoculates the germ of yellow fever.

VAN CAMPENHOUT'S TREATMENT.

Following is a description of Dr. Van Campenhout's method of treatment:

First period.—The treatment consists of subcutaneous or intramuscular injections of atoxyl. Commence by injecting 5 cubic centimeters of a solution of 5 per cent of atoxyl, increasing the dose 1 cubic centimeter at each succeeding treatment, which follows at intervals of four or five days. The dose is thus gradually increased until it is at least 10 cubic centimeters at each treatment, when it is gradually reduced 1 cubic centimeter per each injection, finally ending with 5 cubic centimeters. If an examination of the liquid of a lymphatic gland or the blood one month after the treatment has been discontinued shows the presence of trypanosomæ the treatment should be recommenced and repeated.

Second period.—The treatment consists of subcutaneous or intramuscular injections of atoxyl, of sulphate of strychnine by ingestion, and cold shower baths morning and evening, these means to be employed at the same time.

Atoxyl.—Inject every five days under the skin, at the usual points of injection, a solution of atoxyl. Begin with 5 cubic centimeters of a solution of 5 per cent (or 25 centigrams) of atoxyl. Increase the dose every five days by 1 cubic centimeter (or 5 centigrams of atoxyl). The dose should not be increased if symptoms of poisoning appear (headaches, profuse diarrhea, etc.) The dose injected is thus gradually increased to 16 cubic centimeters (or 80 centigrams of atoxyl, and then gradually decreased 1 cubic centimeter at each treatment until finally ending with 5 cubic centimeters.

Solutions of atoxyl are difficult to keep. They should be prepared for a time not longer than two weeks at most, and kept in dark-colored glass bottles. As soon as the solution takes on a yellowish tinge it should be destroyed. Syringes should never be washed in carbolic acid, as it decomposes the atoxyl. As an antiseptic a solution of boracic acid and water or simply boiled water may be used.

Sulphate of strychnine.—Begin with 3 pills a day (morning, noon, and night) of 1 milligram each; increase the dose 1 pill a day until the patient takes 10 pills per day at three different times. The dose is then increased 1 pill per week. If no improvement is produced up to this dose, the quantity of pills per day may be increased to 15 or 17. Up to the present time it has not been necessary to exceed 17 pills. After reaching the quantity of 17 milligrams the daily dose of strychnine is rapidly reduced by 1 pill per day until the dose is only 3 pills at the end of the treatment. Strychnine, a very active drug, may produce symptoms of poisoning, which are manifested by contractions of the muscles of the jaw. As soon as these contractions are observed, the dose for the time being must not be increased, but as soon as the symptoms have disappeared the dose may be increased.

Shower baths.—Cold shower baths to be taken daily, morning and evening, administered to the patient completely nude, and should cover the whole body. Light exercise should be taken after each shower bath to bring about a reaction. In very serious cases, or with natives who can not remain for a given length of time in treatment, the atoxyl may be injected every three or four days, provided a careful watch is kept for symptoms of poisoning. The strychnine treatment might also begin with 6 milligrams per day, increasing daily by 1 milligram until the dose reaches 14 or 15 milligrams daily, when the dose is gradually reduced to 3 milligrams per day.

NON-INFLAMMABLE WOOD.

FRENCH EXPERIMENTS TO SECURE THIS DESIRABLE RESULT.

Consul D. I. Murphy reports from Bordeaux interesting experiments on the great public square, the "Quinconces," where is to be held from May to October next the International Maritime Exposition in commemoration of the hundredth anniversary of Fulton's successful application of steam to navigation. The consul writes:

Warned by the great damage caused by the recent fire at the Milan Exposition, in which valuable paintings, tapestries, and other works of art were destroyed, the deputy commissioner-general devoted much of

his time to the study and investigation of the different methods of rendering wood, paper, silk, cotton, and woollen stuffs non-inflammable. Of all the formulæ submitted he decided to experiment with the following: Sulphate of ammonia, 135 grams; borate of soda, 15 grams; boric acid, 5 grams, and water, 1,000 grams. The exhibition consisted of treating pine shavings, wood, paper, and cotton fiber with this preparation and, after a thorough drying, applying the fire test.

A huge pile of shavings, pine kindlings, and wood was set on fire, and in the blaze were thrown shavings and sticks of wood impregnated with this "ignifuge." When the fire had exhausted itself the impregnated shavings and wood were found to be simply blackened and charred; they gave out no flame. Paper and cotton fiber treated with the same solution when exposed to the flames consumed very slowly without a blaze. So successful and conclusive seemed the demonstration that Mr. Mbrlot gave orders that all wood and timber used in the construction of the exposition buildings and all cotton, canvas, and linen stuffs, carpets and rugs employed in the furnishing thereof should be treated with this "ignifuge."

I was present at the exhibition and afterwards witnessed the application of the liquid to some heavy timbers which were quickly and effectively treated by the workmen, who directed streams of the preparation from receptacles strapped to their backs in the manner of an American fire extinguisher. In addition to the precautionary measures adopted the fire department will have all the exposition buildings under close and constant inspection. The buildings now being constructed are on the river front, so that abundant supplies of water will always be available. Exhibitors and visitors may be assured that the danger of fire will be minimized, and that the calamities that have marred the success of some of the notable exhibitions can hardly occur at the "International Maritime Exposition" at Bordeaux next year.

CONGRESS ON NAVIGATION.

PREPARING FOR THE INTERNATIONAL MEETING AT ST. PETERSBURG.

The next International Congress on Navigation is to be held at St. Petersburg in June, 1908, and already a provisional programme has been arranged in the hope that engineers of other countries will prepare papers or make other contributions.

As regards ocean navigation the congress seek information as to the best type of sea-going vessel for freight service and in relation to transshipment of cargo to craft on inland waterways and canals. A subject of more definite nature is the relative advantage of dry docks, floating docks, lifting appliances, etc., for the repair of ships. The other subjects under the general head of "Ocean navigation" are the application and preservation of armored concrete in maritime works, harbors of refuge, the construction of ports on sandy shores, etc. As to inland navigation three questions are being addressed to all interested in such matters. These are (1) arrangements to be given to weirs in rivers having great variations of discharge and occasionally carrying down large quantities of ice, so as to subserve the interests of navigation and industry; (2) study of the economical and technical conditions of the working arrangements and mechanical traction of boats on

rivers, canals, and lakes, and of the regulations necessary for this purpose; (3) equipment of ports of inland navigation, especially the advance made in electric plants. Papers will be read on the participation of the Government and the various parties interested in the expenses necessary for the development of inland navigation, including, if required, the power to be given to the Government to acquire a part of the land which would be improved in value along new waterways.

WORLD'S COMMERCE.

GREAT BRITAIN AGAIN LEADS IN EXPORTS AS WELL AS IMPORTS.

The following summary table has been prepared by the British Board of Trade, showing the total imports and exports of merchandise of the principal countries for the first half of this year, for which the particulars can be given. The corresponding figures for 1905 and 1904 are added for comparison:

Countries.	Imports.			Domestic exports.		
	1904.	1905.	1906.	1904.	1905.	1906.
United States	\$515,381,816	\$698,112,316	\$646,329,598	\$669,172,949	\$736,121,389	\$856,314,206
Germany	766,683,009	794,850,811	980,760,344	604,511,763	630,051,156	695,116,260
Belgium ^a	258,440,849	276,849,517	308,823,223	190,221,752	199,575,165	231,585,575
France	454,623,563	471,021,432	518,371,570	416,825,458	449,100,086	471,753,643
Switzerland	110,727,474	110,000,000	128,188,346	82,565,039	87,309,876	98,736,418
Spain ^a	78,973,562	9	96,685,123	79,056,292	78,771,405	81,961,860
Egypt	43,841,049	4	52,499,802	55,205,576	47,981,690	55,697,092
Japan	90,614,230	14	110,605,812	67,678,415	70,160,330	86,575,035
British India	145,328,289	15	172,176,770	285,365,645	254,143,229	278,903,961
Canada	122,045,618	12	149,506,613	75,445,062	77,649,874	102,337,628
United Kingdom	1,143,097,051	1,18	1,246,573,441	701,345,380	757,743,249	878,860,701
Russia (4 months) ^b	104,566,485	7	100,040,640	126,217,544	135,244,901	138,620,046
Portugal (2 months)	10,151,519	1	10,292,647	5,323,684	4,905,432	5,046,560
Italy (5 months)	157,406,942	15	182,679,334	117,691,436	129,356,436	147,673,942
Austria-Hungary (5 months)	172,429,828	134,445,216	206,694,854	175,140,468	163,003,417	188,469,812
Mexico (4 months)	27,505,458	28,634,486	43,019,860	31,869,459	34,240,694	43,885,976

^a Value of principal articles only.

^b European and Black Sea frontiers.

In the case of Germany, Belgium, France, Switzerland, Egypt, Japan, Canada, and the United Kingdom, the import figures given in the above summaries represent imports for home consumption only, i. e., excluding reexports. In all cases the export figures are intended to represent exports of domestic produce. In most cases, however, they include a certain amount of "nationalized" goods, i. e., goods originally imported for consumption, and which, if dutiable, have been charged with duty, but which are subsequently reexported.

BRITISH CAPITAL IN THE SOUTH.

LANCASHIRE MANUFACTURERS TO RUN COTTON PLANTATIONS.

The Textile World Record for October contains the following in regard to a proposed investment in the cotton-growing States of the South by Lancashire manufacturers of cotton goods:

A sequel to the Washington cotton conference and the visit of the Lancashire manufacturers to this country last spring is the proposed

investment of Lancashire capital in the raising of American cotton. We are informed that two Lancashire manufacturers will arrive in the United States within a few weeks and complete arrangements for the purchase and management of a large cotton plantation in the South, probably in Texas. There is said to be ample capital back of the enterprise. The plan is to adopt the most improved methods of cultivation, ginning, and baling, and ship the cotton direct to the Lancashire mills controlled by the promoters.

It is to be hoped this venture by English manufacturers will be entirely successful. Its success will mean much for the cotton trade. We have had a surfeit of precept as to the evils that oppress the cotton trade and their remedies, all to no purpose. The evils have grown greater, and those responsible for them have treated all protests with contempt. What we need now is an example. The example of a large plantation in the South, producing cotton properly baled and shipped to Lancashire and there received in good order at the mills, would mark the beginning of the end of the present disgraceful methods of baling American cotton. The existing combine of ginners that blocks all attempts by planters and manufacturers to improve conditions might for a time resist even the influence of a good example, but eventually they would be forced to adopt the improved processes. It may be safely assumed that the present methods of preparing cotton for market can not exist permanently alongside of right methods. The former have continued because all American cotton has been and is baled in an equally bad way.

The influence of such a plantation on the other evils that afflict the cotton trade are not equally evident. There is no doubt, however, but that such influence would be entirely for good. A large and well-managed cotton plantation, owned by cotton manufacturers, producing cotton for the mills of its owners, forming a component part of one complete industry, might not eliminate the speculator from the cotton market, but it could not fail to indicate to the manufacturer a refuge from the speculator's attacks.

CEMENT COMBINATION.

The Geological Survey in a bulletin states that there is a noticeable concentration of interests in the cement industry, and that this probably will become marked year by year. The 88 plants in existence in 1905 were owned by 78 companies and several of these nominally independent companies are closely connected by ownership. But it is stated that good raw materials are so widely distributed in the United States that there is hardly a county which could not produce Portland cement if prices were forced high enough. The only limitation now on the erection of cement plants is the fact that the great cost makes the venture prohibitive for the individual or for the small firm. The cement industry is at present in a more concentrated condition than was the iron and steel industry at the date of the formation of the United States Steel Corporation. The total authorized capital of all the American Portland cement companies now in operation will fall between the limits of \$110,000,000 and \$125,000,000. The bulletin states that this capitalization can not be considered excessive in view of the fact that it would cost probably from \$75,000,000 to \$85,000,000 to replace the plants now in existence.

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The above consular reports were until July, 1903, issued by the Bureau of Foreign Commerce of the State Department; from that date until June, 1905, they were issued by the Bureau of Statistics of the Department of Commerce and Labor, with which the Bureau of Foreign Commerce of the State Department was consolidated July 1, 1903; since July 1, 1905, they have been issued by the Bureau of Manufactures, Department of Commerce and Labor. For details of these publications, the subjects of which the special reports treat, and the reports remaining for distribution, address "Chief, Bureau of Manufactures, Department of Commerce and Labor, Washington, D. C."

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VALUES OF FOREIGN COINS AND CURRENCIES.

[As given by the Director of U. S. Mint and published by Secretary of the Treasury Oct. 1, 1906.]

COUNTRIES WITH FIXED CURRENCIES.

Countries.	Monetary unit.	Value in U.S. gold.	Coins.
Argentina	Peso	\$0.96, 5	Gold—argentine (\$4.82,4) and $\frac{1}{2}$ argentine; silver—peso and divisions.
Austria-Hungary	Crown .....	.20, 3	Gold—20 crowns (\$4.05,2) and 10 crowns; silver—1 and 5 crowns.
Belgium	Franc .....	.19, 3	Gold—10 and 20 francs; silver—5 francs.
Brazil	Milreis .....	.54, 6	Gold—5, 10, and 20 milreis; silver— $\frac{1}{4}$, 1, and 2 milreis.
British N. A. (except Newfoundland).	Dollar	1.00	
British Honduras.....	do	1.00	
Chile.....	Peso .....	.36, 5	Gold—escudo (\$1.825), doubloon (\$3.65), and condor (\$7.30); silver—peso and divisions.
Colombia	Dollar	1.00	Gold—condor (\$9.647) and double condor; silver—peso.
Costa Rica	Colon.....	.46, 5	Gold—2, 5, 10, and 20 colons (\$9.30,7); silver—5, 10, 25, and 50 centimos.
Denmark	Crown .....	.26, 8	Gold—10 and 20 crowns.
Ecuador	Sucre.....	.48, 7	Gold—10 sucres (\$4.8665); silver—sucre and divisions.
Egypt.....	Pound (100 plasters).	4.94, 3	Gold—5, 10, 20, and 50 plasters; silver—1, 2, 5, 10, and 20 plasters.
Finland.....	Mark .....	.19, 3	Gold—10 and 20 marks (\$1.93 and \$3.85,9).
France.....	Franc .....	.19, 3	Gold—5, 10, 20, 50, and 100 francs; silver—5 francs.
Germany	Mark .....	.23, 8	Gold—5, 10, and 20 marks.
Great Britain	Pound sterling ..	4.86, 6 $\frac{1}{2}$	Gold—sovereign (£) and half sovereign.
Greece	Drachma .....	.19, 3	Gold—5, 10, 20, 50, and 100 drachmas; silver—5 drachmas.
Haiti.....	Gourde .....	.96, 5	1, 2, 5, and 10 gourdes; silver—gourdes and divisions.
India	Pound sterling ^a .	4.86, 6 $\frac{1}{2}$	Gold—sovereign (£); silver—rupee and divisions.
Italy	Lira .....	.19, 3	Gold—5, 10, 20, 50, and 100 lire; silver—5 lire.
Japan.....	Yen .....	.49, 8	Gold—5, 10, and 20 yen; silver—10, 20, and 50 sen.
Liberia	Dollar	1.00	
Mexico	Peso ^b .....	.49, 8	Gold—5 and 10 pesos; silver—dollar ^c or peso and divisions.
Netherlands.....	Florin .....	.40, 2	Gold—10 florins; silver— $\frac{1}{4}$, 1, and 2 $\frac{1}{2}$ florins.
Newfoundland	Dollar	1.01, 4	Gold—\$2 (\$2.02,7).
Norway.....	Crown .....	.26, 8	Gold—10 and 20 crowns.
Panama.....	Balboa	1.00	Gold—1, 2 $\frac{1}{2}$, 5, 10, and 20 balboas; silver—peso and divisions.
Peru	Libra	4.86, 6 $\frac{1}{2}$	Gold— $\frac{1}{4}$ and 1 libra; silver—sol and divisions.
Philippine Islands...	Peso .....	.50	Silver—peso, 50, 20, and 10 centavos.
Portugal	Milreis	1.08	Gold—1, 2, 5, and 10 milreis.
Russia	Ruble .....	.51, 5	Gold—5, 7 $\frac{1}{2}$, 10, and 15 rubles; silver—5, 10, 15, 20, 25, 50, and 100 copeks.
Spain	Peseta .....	.19, 8	Gold—25 pesetas; silver—5 pesetas.
Sweden	Crown .....	.26, 8	Gold—10 and 20 crowns.
Switzerland.....	Franc .....	.19, 3	Gold—5, 10, 20, 50, and 100 francs; silver—5 francs.
Turkey	Plaster .....	.04, 4	Gold—25, 50, 100, 250, and 500 plasters.
Uruguay.....	Peso	1.03, 4	Gold—peso; silver—peso and divisions.
Venezuela	Bolivar .....	.19, 3	Gold—5, 10, 20, 50, and 100 bolivars; silver—5 bolivars.

COUNTRIES WITH FLUCTUATING CURRENCIES. ^d

Country and monetary unit.	Jan. 1, 1906.	Apr. 1, 1906.	July 1, 1906.	Oct. 1, 1906.	Country and monetary unit.	Jan. 1, 1906.	Apr. 1, 1906.	July 1, 1906.	Oct. 1, 1906.
Bolivia:	Cts.	Cts.	Cts.	Cts.	China—Continued.	Cts.	Cts.	Cts.	Cts.
Silver boliviano	46.5	47.8	48.0	48.5	Mexican dollar				52.6
Central America:					Nankin tael.....	75.5	77.5	77.9	78.6
Silver peso	46.5	46.5	48.0	48.5	Ningpo tael.....	73.3	75.3	73.9	76.4
China:					Newchwang tael....	71.5	73.4	75.7	74.5
Amoy tael.....	76.3	78.3	78.8	73.0	Peking tael	74.3	76.3	76.8	77.6
British dollar.....				52.3	Shanghai tael	69.6	71.5	71.9	72.6
Canton tael.....	76.0	78.1	78.5	79.2	Swatow tael	70.4	72.3	72.7	73.4
Chefoo tael.....	72.9	74.9	75.3	76.0	Takau tael.....	76.7	78.8	79.2	79.9
Chinkiang tael	74.5	76.5	76.9	77.6	Tientsin tael.....	73.9	75.9	76.3	77.0
Fuchau tael	70.5	72.4	72.8	73.5	Persia:				
Haikwan (customs) tael.....	77.6	79.7	80.1	80.8	Silver kran	8.6	8.8	8.8	8.9
Hankow tael.....	71.3	73.3	73.7	74.3	Straits Settlements:				
Hongkong dollar....	50.2	51.5	51.8	52.3	Silver dollar				52.3
Kiaochou	75.3	77.3	77.7	77.0					

^aThe rupee, \$0.3244 $\frac{1}{4}$, 15 to the sovereign, constitutes the money of account.

^bSeventy-five centigrams fine gold.

^cValue in Mexico, \$0.498.

^dCoins of silver-standard countries are valued by pure silver content at average market price of silver for the three months preceding date of circular issued by U. S. Treasury Dept.

